

Deterring a Nuclear-armed North Korea

Center for Global Security Research
Lawrence Livermore National Laboratory

NOTE: This is a non-embargoed extract from a forthcoming CGSR publication.

Brad Roberts, editor

Spring 2023

Table of Contents

About the Authors.....	2
Summary.....	2
Preface, <i>Brad Roberts</i>	3
South Korea’s Nuclear Options, <i>Robert Einhorn</i>	4
. The Plausible Alternative to the South Korean Bomb, <i>Brad Roberts</i>	21
China’s Rise and Nuclear Debate in Korea, <i>Manseok Lee</i>	34

About the Authors

Robert Einhorn is a senior fellow at the Strobe Talbott Center for Security, Strategy, and Technology of the Brookings Institution. He served for 35 years at the U.S. Department of State, including as a member of the Policy Planning Staff, deputy assistant secretary for Political-Military Affairs, assistant secretary for Nonproliferation in the Bill Clinton administration, and the Secretary's special advisor for Nonproliferation and Arms Control in the Barack Obama administration. He received a BA in Government from Cornell University and an MPA in International Relations from the Princeton School of Public and International Affairs.

Manseok Lee is an army major of the Republic of Korea. His research interests include international relations in East Asia, strategic stability of the Korean Peninsula, and North Korea's nuclear strategy. Previously, he was a predoctoral fellow at USC Korea Studies Institute, held an instructor position in war history at the Army College of Korea, and worked for the Ministry of National Defense of Korea as a young fellow. Manseok is pursuing his doctoral degree from UC Berkeley and received master's degrees both in Nuclear Engineering and International Studies from U.C. Berkeley. He also holds a BA from the Korea Military Academy.

Brad Roberts is director of the Center for Global Security Research at Lawrence Livermore National Laboratory. He previously served as deputy assistant secretary of defense and nuclear and missile defense policy (2009-2013), as a research fellow at the Institute for Defense Analyses and Center for Strategic and International Studies, and as an adjunct professor at George Washington University. He received his PhD in international relations from Erasmus University, Rotterdam.

Summary

North Korea's continued progress in developing nuclear forces capable of greatly damaging South Korea, Japan, and the United States brings with it new questions about how to ensure that it will be deterred from doing so. The United States and its allies are focused on strengthening deterrence, including the extended nuclear deterrence provided by the United States. The options for doing so are not broadly understood. This paper examines three of them: nuclear weapons acquisition by South Korea, continuation of the long-standing effort to adapt and strengthen deterrence, and a new division of deterrence labor between the United States and the Republic of Korea.

Preface

Brad Roberts

North Korea's continued progress in developing nuclear forces has deepened concerns in the region about the (1) possibility of new forms of nuclear-backed coercion, (2) risks of war by miscalculation or calculation, and (3) potential failure of nuclear deterrence. South Korea and Japan now face a North Korean nuclear threat that is existential, or nearly so. The United States is increasingly vulnerable to North Korean nuclear attack—a fact that some allied experts fear will lead the United States to abandon them in crisis and war.

These deepening concerns are evident in the public debates in both South Korea and Japan, where there is a resurgence of interest in nuclear deterrence and an urgency to exploring options, including some that have been taboo (such as nuclear acquisition in South Korea or NATO-like nuclear sharing arrangements in Japan). These concerns are evident also in the policies of the three governments. In its National Defense Strategy, the Biden administration has expressed a clear commitment to work with U.S. allies in the Indo-Pacific to strengthen the regional deterrence architecture, including extended nuclear deterrence. In subsequent joint communiques with the United States, Japanese Prime Minister Fumio Kishida and South Korean President Yoon Suk Yeol have joined President Biden in making this commitment.

In fact, the commitment to strengthen deterrence of a nuclear-arming North Korea is hardly new. Even while the United States and its allies prioritized diplomatic efforts to prevent and then reverse North Korea's development of nuclear weapons, they also undertook to strengthen deterrence and adapt it to changing circumstances. These efforts date back to the 1990s, when Pyongyang's nuclear ambitions began to become clear. Much has been accomplished, but more can be done.

In today's context, leaders of the U.S.-ROK alliance have two basic options for further strengthening deterrence on the peninsula. One is to opt for an entirely different approach—a South Korean nuclear bomb. Bob Einhorn's opening chapter in this volume maps out the debate about this option in an effort to fully illuminate the benefits, costs, and risks of different courses of action. The other option is to continue the process of adaptation and strengthening deterrence that has long been underway within the alliance but with some significant new steps. My chapter maps out this option. Some of those steps would bring us to a new division of labor for deterrence within the U.S.-ROK alliance. Manseok Lee maps out the logic of such a new division in the third chapter.

The options are clear. The need to choose is obvious. The stakes are high.

South Korea's Nuclear Options

Robert Einhorn

Considering the increasingly stressful international environment faced by the Republic of Korea (ROK), it is understandable that, in recent years, South Koreans have begun to debate publicly fundamental questions affecting their vital national security interests, including whether they should acquire an independent nuclear weapons capability. The decision on whether to “go nuclear” is a sovereign choice that only South Koreans can make. But it is a decision that should only be made after carefully weighing all essential factors, especially the implications for the security and well-being of the South Korean people but also for the ROK's relationship with neighboring countries and the international community at large and particularly with its main security partner, the United States. This paper is an effort to examine some of those factors.

Why South Koreans are Reviewing Their Nuclear Options

A combination of three developments has increased South Korean interest in exploring ways to strengthen deterrence against North Korea, officially known as the Democratic People's Republic of Korea (DPRK).

The growing DPRK threat. The first is the rapid quantitative and qualitative advancement of North Korea's nuclear and missile capabilities and the increasingly provocative rhetoric and actions of the DPRK regime under Kim Jong Un. At its 8th Party Congress in January 2021, the regime provided a checklist of new military capabilities it would be seeking. Since then, and especially during 2022, it has pursued an aggressive program of military activities, most visibly missile tests, designed to realize those capabilities and serve the regime's strategic goals.

North Korea wants solid-fueled intercontinental ballistic missiles (ICBMs) that can reliably penetrate U.S. missile defenses and strike the American homeland with nuclear weapons. It has tested short-, medium-, and intermediate-range missiles that can target South Korea, Japan, and Guam. It has developed and tested land-based, mobile missiles—including what it says are hypersonic systems—that are designed to be accurate, difficult to target, and capable of penetrating allied missile defenses. It has worked on sea-launched ballistic missiles, missile-carrying submarines, missiles launched from trains, and other basing modes to promote the survivability of its deterrent. It is pursuing tactical nuclear weapon systems that could be used on the battlefield in accordance with its declared willingness to employ nuclear weapons first in a crisis. And it has expressed a desire to acquire smaller, lighter nuclear weapons that would require further nuclear testing and that could be deployed on battlefield weapon systems or on multiple-warhead long-range missiles.

In the last several months, the North has combined its accelerated missile testing activity with belligerent rhetoric and highly provocative actions—including large-scale artillery barrages into the North-South maritime buffer zone, the firing of missiles over Japan and into waters south of the Northern Limit Line, the publicized conduct of “tactical nuclear drills” simulating nuclear strikes against targets in South Korea, and the crossing into South Korean

airspace of several surveillance drones. It has justified these provocations as responses to stepped up U.S.-ROK joint military exercises, which it characterizes as preparations for attacking the DPRK. In a November 17, 2022 statement carried by KCNA, North Korean Foreign Minister Choe Son-hui said, “The more the U.S. is bent on strengthening the provision of extended deterrence to its allies, the fiercer our military responses will become in direct proportion to their provocative military activities.”¹

The escalation of North Korea’s threatening activities and pronouncements has unnerved South Koreans and increased their interest in reconsidering their nuclear options.

Fear of a permanent North Korean nuclear capability. A second and related motivation for rethinking nuclear options is the growing realization in South Korea that North Korea’s nuclear weapons capability may be permanent, or at least will not be going away for the foreseeable future. The asymmetry between the two Koreas in the possession of nuclear weapons has long been of concern to South Koreans—not just because of the grave security threat posed by Pyongyang’s nuclear arsenal, but also because this inequality in what is widely seen as an important indicator of national power and status has been deeply disturbing to many in the South (even though by almost every other measure of national success, the ROK is far in the lead).

This nuclear asymmetry was more tolerable as long as it was seen as temporary—that is, as long as South Koreans believed the North could be persuaded or pressured to give up its nuclear deterrent. But prospects for the DPRK abandoning its nuclear weapons capability now seem remote. It has become increasingly apparent that Kim Jong Un has no intention of giving up what he sees as critical to North Korea’s security and the survival of his regime. Everything he has said or done indicates that one of his major goals is to convince the international community, especially the United States, that efforts to denuclearize North Korea are futile and that the DPRK should be accepted as a permanent and legitimate nuclear-armed state. The new law on nuclear policies adopted by the Supreme People’s Assembly in September 2022 was intended in part to codify that the DPRK’s nuclear weapons capability is irreversible and non-negotiable.²

This determination never to abandon its nuclear arsenal has been reflected in the North’s attitude toward negotiations ever since the failed Hanoi summit between Kim Jong Un and President Donald Trump in February 2019. The Biden administration has a realistic perspective on prospects for diplomacy with North Korea. While continuing to reaffirm the “ultimate” goal of the complete denuclearization of the Korean Peninsula, it has indicated that denuclearization is a long-term goal that should be approached incrementally, and it has signaled that it is prepared to agree with the North on limited, near-term measures that provide reciprocal benefits to both sides. But North Korea has rebuffed repeated U.S. efforts to engage, claiming that negotiations are pointless as long as the United States and its allies

¹ “N. Korea warns of ‘fiercer’ military response to U.S. ‘extended deterrence’ to its allies,” Yonhap News (November 17, 2022). <https://en.yna.co.kr/view/AEN20221117002451325>. Accessed February 15, 2023.

² Andrei Lankov, “North Korea’s new nuclear law makes the world a more dangerous place,” NK News (September 23, 2022). <https://www.nknews.org/2022/09/north-koreas-new-nuclear-law-makes-the-world-a-more-dangerous-place/>. Accessed February 15, 2023.

maintain their “hostile policy” toward the DPRK. Moreover, the North, valuing its nuclear deterrent much more than the promise of material well-being for its people, quickly and firmly rejected President Yoon’s “audacious initiative” to reward North Korea generously for steps toward denuclearization.³

In the current geostrategic environment—with China and Russia increasingly aligned with North Korea, helping it evade sanctions, and using their veto to shield it from additional Security Council sanctions—there is little expectation that Pyongyang can be brought to the negotiating table any time soon. It is conceivable that, once North Korea has completed the missile and nuclear tests it considers necessary to achieve its declared milestones, it will be prepared to engage. But in that event, it would only be prepared to limit—not eliminate or even reduce—its capabilities and only in exchange for major sanctions relief and other economic, security, and political benefits.

The United States, ROK, and most of the rest of the international community are unlikely ever to accept North Korea as a legitimate nuclear-armed state and will continue to express support for the goal of the complete denuclearization of the Korean Peninsula. But that goal now seems unrealistic and South Koreans are concluding that the nuclear asymmetry on the Peninsula and the nuclear threat posed by the North may be permanent. This growing recognition increases South Korean incentives to reconsider their non-nuclear status.

Questions about the reliability of U.S. security assurances. A third reason for the ROK to review its nuclear options is continuing uncertainty about the reliability of U.S. security guarantees, and especially the U.S. nuclear umbrella. Questions in Seoul about the reliability of U.S. security assurances are nothing new. President Nixon’s decision in 1970 to begin drawing down U.S. forces in South Korea and President Carter’s announcement in 1977 about removing U.S. troops over a five-year timeframe both shook ROK confidence in U.S. guarantees and contributed to President Park Chung Hee’s decision to pursue a covert program—eventually halted largely by U.S. pressure—to develop an indigenous South Korean nuclear capability.⁴ More recently, President Trump’s transactional approach to U.S. alliances—including seeking exorbitant financial compensation from Seoul for stationing U.S. forces in South Korea and threatening to withdraw those forces if his demands were not met—renewed concerns about U.S. steadfastness in support of its treaty ally.⁵ These concerns were exacerbated by North Korea’s testing of ICBMs capable of reaching the American homeland, raising questions about whether a U.S. administration would put U.S. cities at risk of nuclear attack by intervening in a Korean Peninsula conflict, including with the use of nuclear weapons, in defense of South Korea.

³ “N. Korea rejects S. Korea’s ‘audacious initiative’ in statement by leader’s sister,” Yonhap News (August 19, 2022). <https://en.yna.co.kr/view/AEN20220819000351325>. Accessed February 15, 2023.

⁴ Yong-Sup Han, “South Korea and Nuclear Weapons: Retrospect and Prospects,” Asia Pacific Leadership Network Policy Brief No. 56 (January 2018). <https://cms.apln.network/wp-content/uploads/2020/12/Policy-Brief-No-56-South-Korea-and-Nuclear-Weapons-Retrospect-and-Prospects.pdf>. Accessed February 15, 2023.

⁵ Choe Sang-Hun and Motoko Rich, “Trump’s Talk of U.S. Troop Cuts Unnerves South Korea and Japan,” *The New York Times* (May 4, 2018). <https://www.nytimes.com/2018/05/04/world/asia/south-korea-troop-withdrawal-united-states.html>. Accessed February 15, 2023.

One of the Biden administration's top foreign policy priorities has been strengthening U.S. alliances and reassuring U.S. allies about the reliability of U.S. security commitments. In light of the growing North Korean threat, it has made special efforts to reassure Seoul. In the joint statement following his May 2022 summit meeting with President Yoon Suk-yeol, Biden stressed "the U.S. extended deterrence commitment to the ROK using the full range of defense capabilities, including nuclear, conventional, and missile defense capabilities." The leaders agreed "to initiate discussions to expand the scope and scale of combined military exercises and training" and reaffirmed "the commitment of the U.S. to deploy strategic U.S. military assets in a timely and coordinated manner as necessary, as well as to enhance such measures and identify new or additional steps to reinforce deterrence."⁶

Since the Biden-Yoon summit, the allies have resumed large-scale combined field exercises, which had been suspended or scaled back by the Trump administration. They held a meeting of the high-level Extended Deterrence Strategy and Consultation Group, which had been dormant for over four years. The United States used visits of strategic assets to demonstrate its commitment and resolve, including the aircraft carrier Ronald Reagan's port call in Busan and flyovers by U.S. strategic bombers. Recognizing the important contribution to deterrence of defense cooperation between the United States, South Korea, and Japan, the three countries participated in missile defense exercises in August 2022⁷ and maritime anti-submarine exercises in September 2022.⁸ A succession of senior-level U.S.-ROK meetings, including the Security Consultative Meeting (SCM) between the American and South Korean defense ministers in November 2022, provided highly visible opportunities for the allies to showcase their cooperation and plan further steps to strengthen their combined deterrence posture.

Efforts by the Biden administration to reinforce the alliance have done much to restore ROK confidence in the reliability of the United States as a security partner. But concerns in South Korea about the effectiveness of the U.S. extended deterrent have not gone away, especially with Kim Jong Un threatening the preemptive use of nuclear weapons against South Korea and pursuing ICBMs that pose the extremely unsettling question of whether the United States would risk Los Angeles (or Seattle or Chicago) to defend Seoul. Moreover, as much as South Koreans may trust the assurances provided by the current U.S. administration, they worry that a future administration, whether led by Trump or another politician espousing America First policies, may have a very different approach toward U.S. overseas commitments.

⁶ The White House, "United States-Republic of Korea Leaders' Joint Statement" (May 21, 2022). <https://www.whitehouse.gov/briefing-room/statements-releases/2022/05/21/united-states-republic-of-korea-leaders-joint-statement/>. Accessed February 15, 2023.

⁷ U.S. Department of Defense, "U.S., Republic of Korea, and Japan Participate in Missile Defense Exercise in Hawaii" (August 15, 2022). [https://www.defense.gov/News/Releases/Release/Article/3128442/us-republic-of-korea-and-japan-participate-in-missile-defense-exercise-in-hawaii/#:~:text=From%20August%208%2D14%2C%202022,Facility%20\(PMRF\)%20in%20Hawaii](https://www.defense.gov/News/Releases/Release/Article/3128442/us-republic-of-korea-and-japan-participate-in-missile-defense-exercise-in-hawaii/#:~:text=From%20August%208%2D14%2C%202022,Facility%20(PMRF)%20in%20Hawaii). Accessed February 15, 2023.

⁸ Hyonhee Shin, "South Korea, U.S., Japan stage anti-submarine drills amid North Korea tensions," Reuters (September 30, 2022). [reuters.com/business/aerospace-defense/skorea-us-japan-stage-anti-submarine-drills-amid-nkorea-tension-2022-09-30/](https://www.reuters.com/business/aerospace-defense/skorea-us-japan-stage-anti-submarine-drills-amid-nkorea-tension-2022-09-30/). Accessed February 15, 2023.

ROK Options for Enhancing Deterrence

These worrisome developments have led many South Koreans to consider various approaches to bolstering their security, both to deter the DPRK and to reassure the South Korean public.

Bring U.S. nuclear weapons back. As one of the Presidential Nuclear Initiatives undertaken in 1991 and 1992 to roll back the legacy of Cold War nuclear confrontation, the United States brought home the tactical nuclear weapons it had deployed in Europe and Asia.⁹ Thus, one option for South Korea is to bring them back. With accelerated North Korean nuclear and missile testing in recent years, support for deploying U.S. nuclear weapons into the ROK has grown. Proponents maintain that such deployments would send a more powerful, higher profile message of U.S. commitment than continued offshore U.S. nuclear deployments. They also argue that stationing nuclear weapons in South Korea would allow more timely allied responses to DPRK aggression than sending nuclear-armed aircraft long distances from Guam or the continental United States. And they maintain that the use of ROK-based tactical weapons would be less likely to escalate rapidly to nuclear attacks against the American homeland than U.S. responses with its central strategic systems.

Opponents argue that the costs and risks of deployment outweigh the benefits.¹⁰ They point out that nuclear weapons storage sites in South Korea and associated dual-capable aircraft or missile delivery systems would be tempting targets for North Korean preemptive attack. They contend that establishing secure storage infrastructure for nuclear weapons in the South as well as manning and defending that capability would be expensive and would divert financial and human resources from other defense priorities. They claim that the United States already has several nuclear options for responding promptly to North Korean attack (including submarine-launched ballistic missiles with low-yield warheads and U.S.-based ICBMs). And they point out that, given China's harsh economic and political response to South Korea's acceptance of U.S. deployment of a Terminal High Altitude Area Defense (THAAD) missile defense battery, Beijing's reaction to U.S. nuclear weapons in the South would likely be much stronger, jeopardizing the South Korean government's efforts to maintain constructive relations with China.

Although ROK officials may have broached the idea of deploying U.S. nuclear weapons to South Korea, including in 2017,¹¹ the U.S. government has not been receptive, for several of the reasons outlined above.

⁹ For a discussion of the PNIs, see Susan J. Koch, *The Presidential Nuclear Initiatives of 1991-1992*, WMD Case Study #5 (Washington, DC: National Defense University, 2012).

¹⁰ See Jon Wolfsthal and Toby Dalton, "Seven Reasons Why Putting Nukes Back in South Korea Is a Terrible Idea," *Foreign Policy* (October 11, 2017). <https://foreignpolicy.com/2017/10/11/putting-u-s-nukes-back-in-south-korea-is-a-terrible-idea/> (accessed February 15, 2023) and Zachary Keck, "4 Reasons America Shouldn't Send Nuclear Weapons to South Korea or Japan," *The National Interest* (September 15, 2017). <https://nationalinterest.org/blog/the-buzz/4-reasons-america-shouldnt-sent-nuclear-weapons-south-korea-22339>. Accessed February 15, 2023.

¹¹ Anna Fifield, "South Korea's defense minister suggests bringing back tactical U.S. nuclear weapons," *The Washington Post* (September 4, 2017). <https://www.washingtonpost.com/world/south-koreas-defense-minister->

NATO-type nuclear sharing. Another approach that has received support among some South Korean politicians and security experts is for the United States and the ROK to adopt nuclear-sharing arrangements similar to those that NATO has had in place for many decades. Those arrangements include the stationing of U.S. nuclear weapons under strict U.S. control on the territories of several NATO members; the acquisition of dual-capable aircraft by those NATO members and the certification of those aircraft for nuclear weapons delivery; the handover of U.S. nuclear weapons to allied air crews to carry out “nuclear missions” in wartime; and the execution of those nuclear missions only after authorization is received from the president of the United States. According to a NATO factsheet, NATO’s nuclear sharing is the sharing of the Alliance’s nuclear mission—“not the sharing of nuclear weapons.”¹²

Advocates believe that, by giving the ROK a critical operational role in alliance nuclear missions, such an approach would both strengthen deterrence of North Korea and reassure the South Korean public. They point out that South Korea could have that role without contravening the Treaty on the Non-Proliferation of Nuclear Weapons [more commonly known as the Non-Proliferation Treaty (NPT)], since U.S. and Soviet negotiators in the 1960s carefully worked out NPT provisions that did not preclude NATO nuclear sharing arrangements. Moreover, they ask, doesn’t South Korea—with the acute threat it faces from North Korea and the uniquely integrated and trusting security ties it has maintained with its U.S. ally for decades—merit the same treatment the United States accords to its European allies?

Opponents of NATO-type nuclear sharing note that deployment of U.S. nuclear weapons in South Korea would involve the same problems discussed above, including making nuclear storage sites and allied delivery systems potential targets of preemptive attack and burdening the alliance with the costs of building the necessary infrastructure. If nuclear sharing with the ROK did not involve the stationing of nuclear weapons in South Korea—and instead required moving nuclear weapons to South Korea in a crisis—that would pose its own problems, including the practical difficulty of transferring nuclear weapons to the Peninsula promptly and safely in a crisis and the risk of dramatically escalating the situation. Moreover, critical questions regarding nuclear sharing, such as the respective roles of U.S. and South Korean leaders in authorizing nuclear missions, could become highly contentious political issues and prove difficult to resolve. And perhaps the most basic argument against nuclear sharing from many opponents is that it is not necessary—that existing alliance deterrence arrangements are effective and can be further improved without far-reaching changes.

Nuclear sharing could also receive some of the same negative reactions from neighboring countries as the deployment of U.S. nuclear weapons in South Korea. At the August 2022 NPT Review Conference, the Chinese representative argued, contrary to the widely supported U.S. interpretation, that nuclear sharing violated the NPT. He further warned that “Any attempt to replicate the NATO’s nuclear sharing model in the Asia-Pacific region would

[raises-the-idea-of-bringing-back-tactical-us-nuclear-weapons/2017/09/04/7a468314-9155-11e7-b9bc-b2f7903bab0d_story.html](https://www.washingtonpost.com/news/energy-environment/wp/2017/09/04/7a468314-9155-11e7-b9bc-b2f7903bab0d_story.html). Accessed February 15, 2023.

¹² NATO, “NATO’s Nuclear Sharing Arrangements” (February 2022), factsheet.

https://www.nato.int/nato_static_fl2014/assets/pdf/2022/2/pdf/220204-factsheet-nuclear-sharing-arrange.pdf. Accessed February 15, 2023.

undermine regional stability and would be firmly opposed by the countries of the region and, when necessary, face severe countermeasures.”¹³

The United States government is just as skeptical toward NATO-type nuclear sharing as it is toward the deployment of U.S. nuclear weapons in South Korea. Asked in a September 2021 online forum about then-presidential candidate Yoon Suk-yeol's statement that he would urge Washington to deploy tactical nuclear weapons or agree to nuclear sharing, Mark Lambert, U.S. Deputy Assistant Secretary of State for Japan and Korea, said, “U.S. policy would not support that.”¹⁴ More recently, and especially after Yoon became president, American officials have not been as explicit about their opposition to such approaches. Welcoming the strong convergence of views between the Yoon and Biden administration on strengthening the alliance, they have wanted to avoid taking public positions that are at odds with or dismissive of influential thinking in South Korea, including among members of Yoon’s People Power Party.

Since assuming office, and wishing to show solidarity with the United States, President Yoon’s administration has not officially supported deployment or nuclear sharing. But the attitude of his administration toward such measures is not settled and remains under consideration. When asked on October 11, 2022, about the debate in South Korea on deployment of U.S. nuclear weapons, Yoon said he was “weighing [the option] while listening attentively to various options from the South Korean and U.S. governments and the public.”¹⁵

Strengthening the U.S. extended nuclear deterrent. For the time being, the Yoon and Biden administrations have found common ground on an approach to strengthening alliance security other than deployment of U.S. nuclear weapons or nuclear sharing: reinforcing the current U.S. extended nuclear deterrent. As described above, that has been a critical focus of U.S.-ROK engagement on security matters. And support for reinforcing the U.S. extended nuclear deterrent has been combined with the allies’ emphasis on strengthening their non-nuclear capabilities, including the ROK’s own conventional capabilities as well as the allies’ missile defense, cyber, and space capabilities.

Yoon administration officials have expressed satisfaction with recent efforts to strengthen extended deterrence. They have welcomed the many high-level statements of U.S. commitment, the stepped-up combined training and exercises, the U.S. intention to increase the frequency and intensity of U.S. strategic asset rotational deployments, the high-visibility port calls and strategic flyovers, the revitalization of bilateral extended deterrence consultations, and so on. They especially welcomed Secretary Austin’s bold statement at the November 2022 SCM—which echoed the language of the Biden administration’s 2022 Nuclear Posture Review and reaffirmed the position taken by the Trump administration—that “any

¹³ Remarks by Chinese Ambassador Fu Cong (August 2, 2022).

https://www.fmprc.gov.cn/mfa_eng/wjdt_665385/zyjh_665391/202208/t20220803_10732780.html. Accessed February 15, 2023.

¹⁴ William Gallo, “US Rules Out Redeploying Tactical Nukes to South Korea,” Voice of America (September 24, 2021). <https://www.voanews.com/a/us-rules-out-redeploying-tactical-nukes-to-south-korea/6243767.html>. Accessed February 15, 2023.

¹⁵ “US tactical nuke redeployment, NATO-style nuclear sharing off table, S. Korea says,” *The Korea Herald* (October 25, 2022). <https://www.koreaherald.com/common/newsprint.php?ud=20221025000575>. Accessed February 16, 2023.

nuclear attack against the United States or its Allies and partners, including the use of non-strategic nuclear weapons, is unacceptable and will result in the end of the Kim regime.”¹⁶

There seems to be a gap, however, between what ROK officials are calling for and what U.S. officials are prepared to do. Public comments on the issue of deployment of U.S. strategic assets to the region, for example, seem to reveal differences that presumably have been hashed out in private. In their joint press event, Defense Minister Lee said that Secretary Austin pledged to employ U.S. strategic assets “to the level equivalent to constant deployment” through increasing the frequency and intensity of deployments,” while Secretary Austin emphasized that there will be “no new deployments on a permanent basis, but you’ll see assets move in and out on a routine basis.” The remarks are compatible but suggest that the South Koreans want a more permanent U.S. strategic presence in and around the Peninsula than the Americans are prepared to accept.¹⁷

In general, the South Koreans seem to be pressing for more—a more permanent and visible U.S. strategic presence in or around the Korean Peninsula, a more prominent role in developing extended deterrence policies, greater insights into U.S. nuclear planning, and a greater voice on whether and when nuclear weapons should be used on the Peninsula.

The U.S. government recognizes the need to bolster the ROK’s confidence in the reliability of U.S. security commitments, and it is prepared to reassure the South Koreans through high-level affirmations of support, close consultations, and frequent, tangible displays of American commitment. But it believes existing U.S. extended deterrence policies and capabilities—including U.S. central strategic systems as well as the capability to forward deploy dual-capable fighter aircraft, strategic bombers, and nuclear weapons to the region if necessary—already constitute an effective deterrent against North Korea. It is reluctant to make major changes that it considers unnecessary, expensive, time consuming, and potentially destabilizing.

Regarding the South Korean role in nuclear deterrence of North Korea, American officials for decades have essentially been telling their ROK ally not to worry—that the United States would handle it. While the allies have worked together intimately and effectively in the development of conventional war plans, little information has been shared on U.S. nuclear policies and plans. To the South Koreans, the U.S. extended nuclear deterrent has been a black box. For many years, this was tolerable if not very satisfying to America’s close ally. But with the dramatic increase in the North Korean threat, it is no longer acceptable to them.

¹⁶ Lara Seligman and Paul McLeary, “Pentagon: A North Korea nuclear attack would result in the end of the Kim regime,” Politico (November 3, 2022). <https://www.politico.com/news/2022/11/03/u-s-south-korea-defense-chiefs-north-korea-missile-00064898>. Accessed February 16, 2023.

¹⁷ U.S. Department of Defense, “Transcript: Secretary of Defense Lloyd J. Austin III and South Korean Minister of National Defense Lee Jong-sup Hold a News Conference” (November 3, 2022). <https://www.defense.gov/News/Transcripts/Transcript/Article/3209711/secretary-of-defense-lloyd-j-austin-iii-and-south-korean-minister-of-national-d/>. Accessed February 16, 2023.

South Korea's own nuclear deterrent

The three approaches discussed above—deploying U.S. nuclear weapons in South Korea, adopting NATO-type nuclear sharing, and reinforcing extended deterrence—have one critical feature in common: they all maintain South Korea's heavy reliance on the U.S. nuclear umbrella for its security. All give the American president ultimate authority on whether and when nuclear weapons will be used in its defense. For a significant number of South Koreans, this is a major problem, and they are considering a fourth alternative—the ROK's acquisition of its own nuclear weapons capability.

In opinion surveys carried out in recent years, the option of developing an indigenous nuclear weapons capability has consistently received strong, majority support among the South Korean public. In a well-respected survey conducted in December 2021, 71% favored South Korea's development of its own nuclear program, whereas 56% favored the deployment of U.S. nuclear weapons in South Korea. When asked to choose between those two options, 67% preferred an indigenous ROK capability and only 9% preferred the deployment of U.S. weapons in South Korea. Moreover, when confronted with some of the potential consequences of the ROK acquiring nuclear weapons—such as pressures from China, economic sanctions, and U.S. troop withdrawals—only 11% of the respondents changed their view to opposing South Korea's development of nuclear weapons.¹⁸

Some observers suggest that South Korea's policy elite—including government officials, political leaders, experienced journalists, and non-governmental security experts—is likely to be more aware of the risks and costs of ROK nuclearization and therefore more resistant to it than the public at large. That may be true, but in recent years, a growing number of prominent members of that elite have begun to speak out publicly in support of South Korea's acquisition of nuclear weapons, or at least encourage a serious domestic debate on the nuclear weapons option. And even if some of that public advocacy is designed to achieve domestic political gains or to spur the United States to do more in terms of extended deterrence, the issue is clearly on the national agenda and unlikely to go away. According to an American expert, "support for an independent nuclear arsenal is no longer only on the fringes."¹⁹

Arguments in favor of South Korea acquiring nuclear weapons. Public support for consideration of an ROK nuclear weapons capability has come from South Koreans (including some former government officials and retired military officers, present and former National Assembly members, newspaper editorial writers, and non-governmental security experts) as well as some Americans (mostly non-governmental experts). Among the arguments the proponents make for South Korea developing nuclear weapons are the following:

¹⁸ Toby Dalton, Karl Friedhoff, and Lami Kim, "Thinking Nuclear: South Korean Attitudes toward Nuclear Weapons," Chicago Council on Global Affairs, Lester Crown Center on U.S. Foreign Policy, and Carnegie Endowment for International Peace (February 2022). <https://globalaffairs.org/research/public-opinion-survey/thinking-nuclear-south-korean-attitudes-nuclear-weapons>. Accessed February 16, 2023.

¹⁹ Lauren Sukin, "How bad would a nuclear-armed South Korea be? Let us count the ways," *Bulletin of the Atomic Scientists* (October 21, 2021). <https://thebulletin.org/2021/10/how-bad-would-a-nuclear-armed-south-korea-be-let-us-count-the-ways/>. Accessed February 16, 2023.

- Compared to reliance on the U.S. nuclear umbrella, it would strengthen deterrence against North Korea. For example, in the event of a DPRK-initiated conventional armed conflict on the Peninsula, the North Koreans may feel they could get the U.S. and ROK to back down by threatening or using nuclear weapons first, calculating that Washington would be reluctant to put the U.S. homeland at risk by using U.S. nuclear weapons in response to a DPRK nuclear attack against the South. But, according to this view, Pyongyang would have little doubt about the ROK's willingness to use its own nuclear weapons in response to such an attack, reducing the likelihood of North Korean aggression in the first place.
- South Korea's acquisition of nuclear weapons will not be the stimulus for a regional nuclear arms race, as claimed by opponents of the ROK going nuclear. As Robert Kelly points out, South Korea's neighbors—China, Russia, and North Korea—are already racing to advance their nuclear capabilities.²⁰
- Many South Koreans, including a number of South Korean progressives, would welcome an indigenous nuclear weapons capability as a means of asserting the ROK's strategic autonomy, reducing what is seen in certain quarters as a demeaning dependency on the United States for its security, eliminating its irritating nuclear asymmetry with the DPRK, and bolstering its image as a strong, independent, successful player on the world stage. In the December 2021 public opinion survey mentioned above, 26% of the respondents who supported the ROK acquiring nuclear weapons said the main reason for their support was to increase South Korea's prestige in the international community, slightly above the number (23%) supporting domestic nuclearization to counter the DPRK threat.²¹
- According to some advocates, acquiring nuclear weapons would solve a major strategic problem for South Korea: having a credible deterrent against the North without poisoning its relations with China, its major trading partner. Jennifer Lind and Daryl Press maintain that an indigenous nuclear weapons capability would be a more credible deterrent than reliance on the U.S. nuclear umbrella while, at the same time, it would avoid the need for South Korea to further strengthen strategic ties with Washington, thus allowing it to "retain political independence in a region where China wields ever-greater power and influence." It might be "the only way to save" the U.S.-ROK alliance.²²
- Some say it could also be of strategic benefit to the United States. Seong-Chang Cheong argues that South Korea's nuclearization "will free the United States from the conundrum of whether to use nuclear weapons to defend its East Asia ally. In the end, the U.S. homeland

²⁰ Robert E. Kelly, "The U.S. Should Get Out of the Way in East Asia's Nuclear Debates," *Foreign Policy* (July 15, 2022). <https://foreignpolicy.com/2022/07/15/us-south-korea-japan-east-asia-nuclear-debates-nonproliferation/>. Accessed February 16, 2023.

²¹ Dalton et al., "Thinking Nuclear: South Korean Attitudes toward Nuclear Weapons."

²² Jennifer Lind and Daryl G. Press, "Should South Korea build its own nuclear bomb?" *The Washington Post* (October 7, 2021). https://www.washingtonpost.com/outlook/should-south-korea-go-nuclear/2021/10/07/a40bb400-2628-11ec-8d53-67cfb452aa60_story.html. Accessed February 16, 2023.

and its citizens' lives will be also free from the threat of North Korea's nuclear bombs."²³

Robert Kelly sees an ROK nuclear capability as consistent with the longstanding U.S. goal of supporting greater burden-sharing and less "cheap-riding" by its allies, and he believes such increased burden-sharing would help enable the United States "to finally achieve a more restrained, less sprawling foreign policy, a less gargantuan defense budget, greater focus on China, fewer forever war interventions, and so on. . . There is no reason why greater allied strategic responsibilities should not include WMDs [weapons of mass destruction] if well-governed democratic allies so choose."²⁴

- Unlike in the case of North Korea, which withdrew from the NPT only after being found in violation of its obligations, South Korea's withdrawal and acquisition of nuclear weapons would be legal under NPT Article X and could be justified by the North Korean threat. Some advocates therefore contend that Seoul's decision to withdraw would be seen by the international community as understandable and could result in less damage to the global nonproliferation regime than the opponents of ROK withdrawal assume.
- While the United States currently opposes the acquisition of nuclear weapons by its allies, some proponents maintain that, if Seoul nonetheless acquired them, Washington would decide to tolerate its nuclear capability—just as it came to tolerate the nuclear programs of Israel, India, and Pakistan. It would therefore resist efforts to punish its ally, including by opposing international sanctions and waiving or ignoring U.S. sanctions laws and policies. According to Robert Kelly, "The United States does not pressure friendly nuclear weapon states, including itself, to meet NPT requirements."²⁵ Moreover, the increasing geostrategic competition with China and Russia would provide a strong reason for not alienating an important ally that could strengthen the U.S. side of the emerging strategic equation. The costs to South Korea of defying the United States and acquiring nuclear weapons would therefore be lower than opponents of ROK nuclearization claim.
- Some supporters claim that a South Korean nuclear weapons capability would force North Korea to deal with the Seoul government more seriously. In the past, the North has often refused to engage with the ROK, dismissing it as a puppet regime and preferring to interact with Washington, especially on nuclear issues. Nuclear parity could change the dynamics of the North-South relationship and lead to greater inter-Korean engagement. It could also give South Korea greater leverage to negotiate with the North on nuclear issues, increasing prospects for reducing the DPRK's nuclear capability or even achieving a nuclear weapons-free Korean Peninsula.²⁶

²³ Seong-Chang Cheong, "The Case for South Korea to Go Nuclear," *The Diplomat* (October 22, 2022). <https://thediplomat.com/2022/10/the-case-for-south-korea-to-go-nuclear/>. Accessed February 16, 2023.

²⁴ Kelly, "The U.S. Should Get Out of the Way in East Asia's Nuclear Debates."

²⁵ *Ibid.*

²⁶ Cheong, "The Case for South Korea to Go Nuclear."

- South Korea would be a responsible nuclear-armed state. One of the traditional arguments against nuclear proliferation is that new nuclear powers may not be reliable or capable nuclear custodians and might therefore export sensitive nuclear technology intentionally or inadvertently, fall short of high standards of nuclear safety, or fail to adopt effective nuclear security measures that prevent the theft or seizure of bomb-making equipment or materials. South Korea's impressive track record implementing its large-scale civil nuclear program should alleviate such concerns.
- Supporters point out that, while the Biden administration may have reduced South Korean concerns about the reliability of U.S. security assurances, there are no guarantees that a future U.S. administration will not bring those concerns to the fore again. Moreover, those concerns are not just a function of the policies or personalities of particular American presidents; they also have an objective basis: the vulnerability of the United States to a North Korean nuclear attack—a persistent threat that could get worse over time. In this view, a South Korean nuclear capability would be a prudent insurance policy against an uncertain future.

The opposing view: South Korea should not acquire nuclear weapons. Given the substantial challenges the ROK is facing, it is entirely appropriate for democratic South Korea to debate how best to ensure its security in the uncertain period ahead. But for a variety of reasons, becoming a nuclear-armed state would not be a good choice.

- No one doubts that South Korea has the technical capability and financial resources to produce nuclear weapons. But if it decided to go nuclear, South Korea would want a sizable, sophisticated, and publicly demonstrated nuclear capability, not a few primitive, untested bombs in the basement. That would be a major, costly, and time-consuming undertaking. South Korea has a large and world-class civil nuclear energy program, but it doesn't have the specialized facilities in place to produce a substantial nuclear arsenal. It has no uranium enrichment facilities or readily accessible sources of uranium. It has done plenty of research on ways to separate plutonium from spent fuel but only on a laboratory scale and would need to build a much larger facility. It would have difficulty acquiring uranium that it could irradiate to produce plutonium or identifying spent reactor fuel already in South Korea that could be reprocessed without violating contractual obligations with suppliers or that would provide the optimal grade of plutonium for weapons. It would have to develop a workable bomb design and test it, presumably more than once. Finding a technically suitable and politically acceptable test site in densely populated South Korea could be an insurmountable challenge. Achieving a secure retaliatory capability with survivable basing arrangements could take several years, and it would divert resources from other defense and national priorities.
- Despite North Korea's ability to reach the United States with ICBMs, U.S. extended nuclear deterrence remains effective. Kim Jong Un is not suicidal. He cannot be confident that the United States will be deterred from responding firmly to a DPRK nuclear attack against

South Korea or the American homeland, including by making good on its pledge to end the North Korean regime, with or without the use of U.S. nuclear weapons. For most of the Cold War, U.S. cities were vulnerable to nuclear attack by the Soviet Union (which had many times more nuclear weapons and delivery systems than North Korea). But America's NATO allies retained confidence in the U.S. extended nuclear deterrent, in large part because of the American public's strong support for the alliance as well as the stationing of a large number of U.S. troops in Europe. A similar situation exists with South Korea. With 28,500 U.S. military personnel stationed there, many tens of thousands of American civilians living in Korea, and strong historical ties and shared values, vital U.S. interests would be immediately engaged in any armed conflict on the Peninsula and would demand a decisive U.S. response. Moreover, there is strong bipartisan support in the United States for the U.S.-ROK alliance. As a protection against Trump's mercurial attitudes toward U.S. overseas commitments, Congress included in the 2018 National Defense Authorization Act a provision restricting the ability of a U.S. president to withdraw U.S. troops from South Korea.²⁷

- Although offshore and mostly out of sight, U.S. strategic assets—including forward-deployable dual capable aircraft and strategic bombers as well as missile-carrying submarines and U.S.-based ICBMs—provide survivable and highly effective means of deterring and, if necessary, responding to North Korean aggression. Moreover, the U.S. arsenal has the capability to respond with low-yield nuclear weapons (including the W76-2 SLBM warhead) and weapons that are able to reach their targets quickly. Asked in 2017 about returning U.S. nuclear weapons to South Korea, Secretary of Defense Jim Mattis said a key advantage of U.S. deterrent forces is that adversaries cannot target them. He added: “We have a deterrent and its location is immaterial.”²⁸
- South Korea's acquisition of nuclear weapons would increase instability on the Korean Peninsula. Instead of incentivizing the North Koreans to enter negotiations and agree to nuclear reductions, it would more likely motivate them to increase their capabilities. Competitive rounds of nuclear and missile testing would heighten tensions. Whether or not ROK nuclear weapons would be more likely than the U.S. nuclear arsenal to deter a North Korean nuclear strike—and that is debatable—a South Korean nuclear capability would not prevent DPRK provocations below the nuclear threshold, including provocations that could escalate to large-scale armed conflict. And with both Koreas supporting preemptive military

²⁷ Katie Bo Williams, “To Block Trump's Troop Withdrawals, Congress Turns an Old Tactic Upside Down,” *Defense One* (July 14, 2020). <https://www.defenseone.com/policy/2020/07/unconventional-tactic-becomes-congresss-go-weapon-against-troop-withdrawal/166880/>. Accessed February 16, 2023.

²⁸ U.S. Department of Defense, “Transcript: En Route Media Availability with Secretary Mattis” (September 13, 2017). <https://www.defense.gov/News/Transcripts/Transcript/Article/1309807/>. Accessed February 16, 2023.

strategies (with South Korea's conventional Kill Chain option possibly replaced by a nuclear version), the likelihood of inadvertent nuclear conflict could increase.

- Far from saving the U.S.-ROK alliance, South Korea's possession of nuclear weapons could seriously weaken it. It would not necessarily mean the end of the mutual defense treaty. (The United States and France remain NATO allies, although Washington was never happy with de Gaulle's *force de frappe*.) But with two separate centers of nuclear decisionmaking, the nature of the alliance would fundamentally change. The U.S. commitment to defend South Korea with nuclear weapons if necessary (i.e., the nuclear umbrella) would either be gone or significantly qualified. The United States presumably could still station military personnel in South Korea, but U.S. support for those deployments could erode. Why, American politicians and publics might ask, should the United States bear the costs and possibly greater risks of keeping troops in the South when Seoul claims to be able to defend itself and no longer has faith in U.S. commitments? On the South Korean side, proponents of strategic autonomy, buoyed by an independent nuclear capability, might welcome a partial or total withdrawal of U.S. forces, while believing that its own nuclear capability would allow the ROK to reduce its investment in conventional military capabilities. Whether and in what form the allies' unique combined command structure would survive ROK nuclearization is anyone's guess.
- Instead of enabling South Korea to have its own deterrent without jeopardizing its interest in constructive relations with China, Seoul's acquisition of nuclear weapons could severely damage those relations. While South Korea would portray its move as aimed strictly at North Korea and not China, Beijing would not see it that way. It would likely interpret the ROK's nuclear capability as substantially strengthening the U.S.-led coalition aimed at countering and containing China—a coalition that could also include a nuclear-armed Japan if, as many expect, Japan followed South Korea down the nuclear path. China's harsh punitive measures against Seoul for accepting the deployment of the U.S. THAAD missile defense system could well be a mild version of how China would react to a South Korean decision to acquire nuclear weapons.
- South Korea's withdrawal from the NPT and pursuit of nuclear weapons would do major damage to the global nuclear nonproliferation regime. North Korea joined the NPT with the intention of cheating and withdrew after it was caught. Iran was discovered pursuing a covert nuclear weapons development program and paid a heavy price in terms of sanctions. With U.S. withdrawal from the Joint Comprehensive Plan of Action and efforts to revive it at a dead end, some Iranians are talking about NPT withdrawal. Is that the company South Korea wishes to keep? South Korea would be the first respectable democratic country (and U.S. ally) to leave the Treaty. It would weaken the disincentives for others to follow suit, including Japan. If upstanding world citizens like South Korea and Japan can do it, why not Saudi Arabia, Turkey, and more? What would NPT withdrawal do to South Korea's ambition to become a leading player on the world stage, a "global pivotal state"?

- South Korea would pay a high price for going nuclear. Even if one assumes that a U.S. administration would swallow its disappointment over Seoul's decision, opt for maintaining close ties with its strategically important ally, and work to spare it from harsh punishment as much as possible—and it's hard to predict whether a future administration would react that way—the ROK would still pay a high price. If it so desired, the United States would be able to block Security Council sanctions, but countries opposed to South Korea's nuclearization, especially China but perhaps also Russia and others, could be expected to adopt their own unilateral punitive measures. The U.S. administration would be able to waive a number of U.S. sanctions laws that would be triggered by South Korea's actions, but under some laws, sanctions would be imposed automatically and could be waived only by a vote of Congress and not by the president. That would include the Glenn amendment, which would be triggered by a nuclear test and mandate a cutoff of a wide range of bilateral cooperation, including arms sales and various forms of financial assistance. (The far-reaching Glenn amendment sanctions against India and Pakistan were imposed in May 1998, relaxed incrementally, and finally removed only in September 2001.²⁹) In addition, South Korea's trading partners could become wary of providing the ROK with dual-use and other high technology items that they believed could contribute to its nuclear and missile programs.
- South Korea's civil nuclear energy program would be especially hard hit. Under the U.S.-ROK civil nuclear agreement, bilateral nuclear cooperation would have to cease; South Korea could not use any nuclear reactors, equipment, or materials previously supplied by the United States in its nuclear weapons program; and Washington would even have the right—albeit a hard one to enforce—to demand that such reactors, equipment, and materials be returned to the United States.³⁰ In addition, members of the multilateral Nuclear Suppliers Group (NSG), including all the world's major nuclear suppliers, would be committed under their guidelines to halt all nuclear cooperation with South Korea.³¹ South Korea's civil nuclear power program, which relies entirely on foreign supplies of enriched uranium to fuel its light water reactors and which produces about 27% of the country's electricity (with plans to reach nearly 35% by 2036),³² would come to a halt. So would South Korea's hopes of becoming one of the world's leading exporters of nuclear reactors.

²⁹ *India and Pakistan: U.S. Economic Sanctions*, EveryCRSReport.com (October 12, 2001 – February 3, 2003). <https://www.everycrsreport.com/reports/RS20995.html>. Accessed February 16, 2023.

³⁰ House Document 114-43, 114th Congress, 1st Session, "Text of Proposed Agreement for Cooperation Between the Government of the U.S. and the Government of the Republic of Korea Concerning Peaceful Uses of Nuclear Energy," U.S. Government Publishing Office (2015). [CDOC-114hdoc43.pdf \(govinfo.gov\)](https://www.govinfo.gov/DOC-114/hdoc43.pdf). Accessed February 16, 2023.

³¹ IAEA, *Nuclear Suppliers Group Guidelines for Nuclear Transfers*, <https://www.iaea.org/sites/default/files/publications/documents/infircs/1978/infirc254r14p1.pdf>.

³² "South Korea increases expected contribution of nuclear power," World Nuclear News (January 12, 2023). <https://www.world-nuclear-news.org/Articles/South-Korea-increases-expected-contribution-of-nuc>. Accessed February 16, 2023.

Acquiring an indigenous nuclear weapons capability is not the answer to South Korean security concerns. It would do little, if anything, to enhance deterrence against North Korea and could even undermine ROK security by increasing tensions and crisis instability on the Peninsula, weakening the U.S.-ROK alliance, and antagonizing neighbors, especially China. South Korea's nuclearization would attract widespread international opprobrium and damage the global nuclear nonproliferation regime, undermining its image as a responsible and increasingly influential international player. It would require a major investment of time and financial resources, with significant opportunity costs to other national priorities, including strengthening conventional defense and deterrence capabilities. And South Korea could become the target of economic sanctions and other pressures, with especially disruptive effects on its civil nuclear program.

Reinforcing Extended Deterrence – Status Quo Plus

South Korea's security policy community has debated three major changes to the deterrence status quo: deploying U.S. nuclear weapons in South Korea, adopting NATO-style nuclear sharing, and—the most radical of the three—developing a domestic nuclear weapons capability. Each has its advocates as well as some reasonable—or at least plausible—supporting arguments. But each also has major downsides and strong opponents in both the United States and South Korea.

Among the opponents in Washington is the Biden administration. And none of these three major changes is officially favored by the Yoon administration, although some of its senior officials previously advocated a number of them. For the time being at least, both administrations have coalesced around an approach that has been in place for decades and served the alliance well—reliance on the U.S. extended nuclear deterrent.

But the security environment has changed in recent years, especially the threat from North Korea. And questions about the reliability of the U.S. nuclear umbrella are likely to persist. The allies recognize these factors and have pledged to strengthen extended deterrence. However, as suggested above, the allies don't exactly see eye to eye on how—and the extent to which—it needs to be upgraded.

The United States has tended in the past to resist changes to the status quo. It believes it already has an effective, survivable deterrent and is reluctant to make changes that could increase its vulnerability, costs, and logistical and other practical difficulties. It insists that there are firm limits on the role any ally, whether NATO or East Asian, can play in U.S. nuclear planning and nuclear operations. In particular, it insists that ultimate authority for using U.S. nuclear weapons must continue to rest exclusively with the U.S. president. Nonetheless, the Biden administration now seems prepared to engage in wide-ranging discussions with its ROK ally on how best to deter the DPRK and reassure South Koreans.

The Yoon administration genuinely appreciates the efforts the Biden administration has made to date, including the high-level reaffirmations of U.S. security guarantees and the more frequent, high-profile demonstrations of U.S. commitment, such as visits and rotational deployments of U.S. strategic assets. But the ROK would like more, both in terms of the forward

presence of U.S. strategic assets and, at least equally important, the role South Koreans play in formulating and implementing extended deterrence policies on the Peninsula and in influencing crisis decision-making related to the possible use of nuclear weapons.

In the Extended Deterrence Strategy and Consultation Group and in other bilateral discussions, the South Koreans will push hard for a more prominent role. President Yoon calls for ROK participation in “joint planning” and “joint execution” of the U.S. extended deterrent and U.S.-ROK cooperation in “the management of U.S. nuclear assets,” although he and other senior ROK officials have been unclear, at least in public, on what specifically they have in mind. Moreover, while Yoon puts priority “for now” on working with the Americans to reinforce extended deterrence, he states that South Korea could support deployment of U.S. tactical nuclear weapons or acquire its own nuclear capability if the North Korean threat becomes more serious.³³

The South Koreans will not get everything they want in these discussions on upgrading the extended deterrent—and they probably know that. But they deserve to have a significantly greater voice than they currently have on matters affecting their vital security interests. The Biden administration should show considerable flexibility in accommodating their concerns.

The outcome of these U.S.-ROK deliberations could have a decisive effect on South Korea’s internal debate on its nuclear options. The convergence of U.S. and ROK thinking on extended deterrence issues would not only strengthen deterrence against North Korea and help reassure the South Korean public; it would also reduce the appeal of more problematic options for addressing the DPRK threat.

³³ Jeongmin Kim, “FULL TEXT: Yoon Suk-yeol's remarks on South Korea acquiring nuclear arms,” NK PRO (January 13, 2023). <https://www.nknews.org/pro/full-text-yoon-suk-yeols-remarks-on-south-korea-acquiring-nuclear-arms/>. Accessed February 16, 2023.

The Plausible Alternative to the South Korean Bomb

Brad Roberts

South Korean cries to “do something” are growing louder and more insistent. This is a natural public and political reaction to the darkening shadow cast by the growth, diversification, and improvement of North Korea’s nuclear arsenal and missile delivery systems. But the call to do something implies that nothing has been done. This is incorrect. For decades, the United States and U.S. alliances in the region have anticipated the possibility that prevention and denuclearization might fail. Thus, they have also taken many steps to adapt and strengthen deterrence for new purposes. Before doing something dramatic to break with past practice, policymakers in the ROK and elsewhere should have a clear understanding of those prior and ongoing efforts, of the possibilities for further adaptation and strengthening, and of the overall effectiveness of the alliance’s evolving deterrence posture. Only then can an informed choice be made about the prudence of pursuing a radical alternative.

Toward these ends, this chapter proceeds as follows. It begins with a review of past efforts by the U.S.-ROK alliance to adapt and strengthen deterrence, highlighting the continuity of purpose in recent decades. It then examines recent developments in North Korea’s nuclear posture and assesses whether these call into question the effectiveness of the alliance’s deterrence posture. The chapter then explores what can be done to ensure the needed further adaptation and strengthening of the deterrence posture. My central conclusion is that the urge to do something should be met with a practical agenda of next steps on the alliance’s long-standing trajectory, not with a radical alternative. The alliance’s deterrence posture is fit for purpose but must continue to adapt to remain so, given continued developments of DPRK capabilities and strategy. The necessary further adaptations are within military and political reach.³⁴

Past Approaches to Adapt and Strengthen Deterrence

In recent decades, deterrence has not been the main theme in U.S. strategy toward the emerging North Korean nuclear problem—prevention and, more recently, denuclearization have been the main themes. But U.S. and ROK leaders have consistently recognized the possibility that prevention and denuclearization might fail and that the decades-old effort to deter North Korean aggression and negate its efforts at coercion might grow more challenging.

In anticipation of this possibility, the United States began to adjust its deterrence posture in the 1990s, as North Korea withdrew from the Nuclear Non-Proliferation Treaty and openly pursued nuclear devices and the means to deliver them. The Clinton administration embraced first

³⁴ The views expressed here are those of the author and should not be attributed to his employer or its sponsors. The author is grateful for comments on earlier drafts of this essay by Paul Amato, Paul Choi, Ryan Jacimi, and Manseok Lee and also for comments on these arguments at a CGSR roundtable with South Korean military experts in January 2023.

theater missile defense and then national missile defense as the primary response. It did so in part because it rejected mutual vulnerability as the basis of the strategic relationship with nuclear-arming “outlier” states—a policy, if not a label, common to subsequent presidential administrations.³⁵ This commitment was intended also to negate future North Korean efforts in crisis and war to exploit American vulnerability, as doing so would de-couple the United States from the defense of the ROK and other regional allies when under nuclear threat.

The George W. Bush administration gave a central place to the threat from “rogue” states in its national security and defense strategies. It set out a “new strategic framework” emphasizing the need to negate rogue state threats. It introduced the concept of a “new triad” of strategic systems encompassing strike systems (nuclear, non-nuclear, and non-kinetic), defenses (homeland and theater), and infrastructure (the capacity to respond to future change in a timely manner). It called for the earliest possible deployment of both an initial homeland missile defense capability and a small number of Conventional Prompt Global Strike Systems, largely in response to North Korean developments.³⁶

The Obama administration rebalanced some of the concepts and tools but essentially continued on the same trajectory. It sought to strengthen extended deterrence through the accelerated introduction of non-nuclear means. It also set out a comprehensive approach to adapt and strengthen the regional deterrence architecture in Northeast Asia in partnership with both the ROK and Japan; that approach encompassed steps to ensure a favorable balance of conventional force, timely power projection, regional and homeland missile defense, advanced conventional strike, and dominance in the new military domains.³⁷ In support of that effort, it partnered with its allies to develop new policy-focused nuclear consultation mechanisms. In 2010, the U.S.-ROK Extended Deterrence Policy Committee (EDPC) and U.S.-Japan Extended Deterrence Dialogue began to explore emerging challenges to deterrence and the necessary responses. The EDPC played an important role in this period to deepen shared understandings of the deterrence challenges and of the needed responses. It also helped participants better understand each other’s interests, equities, and vulnerabilities. One result was a tailored deterrence strategy that helped guide subsequent planning.³⁸ In this timeframe, leaders in Washington, Seoul, and Tokyo began to speak about the “deterrence of the alliance” or the “deterrence provided by the alliance,” thus moving beyond the original division of labor by which the ally joins with the United States in providing deterrence at the general level of war but is a beneficiary of deterrence guarantees and capabilities at the strategic level provided by the United States.³⁹

³⁵ Robert S. Litwak, *Outlier States: American Strategies to Change, Contain, or Engage Regimes* (Baltimore, MD: Johns Hopkins University Press, 2012).

³⁶ Remarks by President George W. Bush, National Defense University (May 1, 2001).

³⁷ *Report of the Nuclear Posture Review, 2010*.

³⁸ Karen Parnish, “US, South Korea Announce ‘Tailored Deterrence’ Strategy,” American Forces Press Service (October 3, 2013).

³⁹ Yukio Satoh, *U.S. Extended Deterrence and Japan’s Security*, Livermore Paper No. 2 (Livermore, CA: Center for Global Security Research, 2017).

The alliance's willingness to take these steps was motivated largely by North Korea's nuclear explosive tests in 2006 and 2009 and by North Korea's lethal conventional provocations in 2010.⁴⁰ In Seoul, there was an urgent search for a stronger deterrent. It had two objectives: (1) improved deterrence of non-nuclear but strategic attacks and (2) achieving some role in deterring nuclear attack. For the former, the ROK military pursued doctrinal changes to deter limited objective conventional attacks, through "manifold retaliation."⁴¹ For the latter, it developed the "three Ks": KAMD (Korean air and missile defense, Kill Chain (the capabilities to find, fix, and finish North Korea strike capabilities), and KMPR (Korean massive punishment and retaliation).⁴² The three Ks were conceived as South Korea's new contribution to the alliance's overall capability to deter nuclear attack.

The Trump administration did little to deviate from this legacy trajectory of step-by-step comprehensive adaptation and strengthening—all appearances to the contrary notwithstanding. To be sure, it chose a radically different diplomatic approach to denuclearization—one emphasizing "maximum pressure" to try to coerce Pyongyang to the negotiating table. At one point President Trump seemed to threaten nuclear attack, while at another he declared that "there is no nuclear threat" from the DPRK. But on the U.S. strategic deterrence posture, the Trump administration stayed on course. It maintained the policies to stay ahead of the emerging North Korean missile threat and to pursue improved conventional strike options. The important exception to this general observation relates to the response to the growing DPRK nuclear threat. Unlike its predecessors, the Trump administration sought two supplemental nuclear capabilities in support of extended deterrence (the two were a sea-launched nuclear-armed cruise missile and a low-yield warhead atop a submarine-launched ballistic missile; the former remains in debate, but the latter was deployed).⁴³

The Biden administration has followed in this bipartisan mainstream. Its National Defense Strategy identifies North Korea as a "persistent threat" to the U.S. homeland, deployed U.S. forces, the ROK, and Japan and commits to strengthen and sustain deterrence, reinforce and build out a resilient security architecture in the Indo-Pacific, and work with the ROK to improve its defense capability. Its Missile Defense Review again expresses the commitment to stay ahead of emerging North Korean missile threats, though it seems to recognize that doing so on strictly quantitative metrics will prove impossible and thus emphasizes missile defeat, encompassing "the range of activities to counter the development, acquisition, proliferation, potential and actual adversary offensive missiles of all types, and to limit damage from such use." Its Nuclear Posture Review characterizes North Korea as a persistent and growing danger and states that

⁴⁰ Lisa Collins, "25 Years of Negotiations and Provocations: North Korea and the United States," Center for Strategic and International Studies. <https://beyondparallel.csis.org/25-years-of-negotiations-provocations/>. Accessed March 22, 2023.

⁴¹ "Deterring North Korean Provocations," Brookings Institution (February 7, 2011).

⁴² Ian Bowers and Henrik Stalhane Hiim, "Conventional Counterforce Dilemmas: South Korea's Deterrence Strategy and Stability," *International Security* 45, no. 3 (Winter 2020-2021), p7-39.

⁴³ *Nuclear Posture Review*, 2018.

any nuclear attack by North Korea against the United States or its allies and partners “is unacceptable and will result in the end of the regime.” It goes on to state the commitment to “work with allies and partners to ensure an effective mix of capabilities, concepts, deployments, exercise, and tailored options to deter and, if necessary, respond to coercion and aggression.” It also reiterates long-standing U.S. commitments to “field flexible nuclear forces suited to deterring regional nuclear conflict, including the ability to forward deploy strategic bombers, dual-capable fighter aircraft, and nuclear weapons to the region” and to leverage ally and partner non-nuclear capabilities to support the nuclear mission.⁴⁴

In fulfillment of this strategy, the Biden administration has increased the frequency of displays of U.S. strategic forces in Northeast Asia and increased the intensity of U.S.-ROK joint military exercises. These have included a joint naval exercise also involving Japan. From the release of its Nuclear Posture Review in autumn 2022 through late winter 2023, the Biden administration has also sent repeated messages from multiple high-level sources about the “ironclad” commitment of the United States to South Korea and has also advanced plans to further strengthen nuclear consultation mechanisms.⁴⁵

In sum, the step-by-step effort to strengthen and adapt the deterrence postures of the United States and the ROK has moved through many stages, with substantial and significant results. The alliance’s deterrence posture is much more diverse than before, much less reliant on the assets of one ally, and much less dependent on U.S. nuclear capabilities and declaratory policies that may not be credible to the adversary in some circumstances. For the North Korean nuclear threat, the alliance benefits from the significantly improved South Korean non-nuclear capability as well as U.S. strategic nuclear forces and forward-deployable capabilities, both of which are being modernized. It also benefits from parallel developments in the deterrence and defense posture of the U.S.-Japan alliance and progress in building a regional deterrence architecture encompassing the capabilities of both alliances. Japan’s strong missile defense capabilities and improving capabilities for a long-range precision strike are essential in this regard.

Recent Developments in North Korea’s Nuclear Posture

While the U.S.-ROK alliance has been “doing something” about the emerging North Korean threat, the DPRK has been doing something of its own.⁴⁶ Its progress has also been substantial and impressive. The progress of the U.S.-ROK alliance in strengthening and adapting its deterrence posture must be measured against North Korea’s progress in developing its nuclear force.

⁴⁴ All citations here are from the *National Defense Strategy of 2022* and the “nested” reviews of nuclear posture and missile defense.

⁴⁵ “US reaffirms ironclad commitment to security of South Korea in bilateral talks,” *Korea Times* (February 15, 2023).

⁴⁶ *North Korea Military Power: A Growing Regional and Global Threat* (Washington, DC: Defense Intelligence Agency, 2021).

From Kim Jong Un's November 2017 declaration of the North Korean nuclear force (following six explosive tests and the launch of an ICBM), North Korea has been improving its nuclear force—"building up, improving, and diversifying its nuclear weapons and delivery systems—at a rapid rate of technological progress."⁴⁷ In 2022, the development and testing of ballistic and cruise missiles dramatically accelerated. North Korea may soon have enough missiles to overwhelm the U.S. homeland missile defense system.⁴⁸ Further improvements to its force are in development, including both a new solid-fueled rocket motor for ICBMs and a "super large MLRS" for the launch of short-range rockets. By early 2023, Kim had already committed to "exponentially increase" nuclear warhead production, "mass produce" tactical nuclear weapons, and to deploy a new ICBM "capable of quick counter-strike."⁴⁹

In addition to these developments in North Korea's posture, there have also been significant developments in its nuclear strategy. In a speech in April 2022, Kim Jong Un elaborated on the mission of these new weapons, as follows:

The fundamental mission of our nuclear forces is to deter war. But our nukes can never be confined to the single mission of war deterrent at a time when a situation we are not desirous of at all is created on the land. If any forces try to violate the fundamental interests of our state, our nuclear force will have to decisively accomplish its unexpected second mission.

Five months later, the North Korean government issued a statement on nuclear policy, declaring itself to be a responsible nuclear weapons state, amplifying on the mission of the force, and setting out first principles for the use of nuclear weapons, the conditions of their use, command and control, and readiness.⁵⁰ Those principles can be knit together into a coherent set of ideas about how to exploit North Korea's new nuclear capabilities to enable Pyongyang to achieve Kim Jong Un's goals in peacetime crisis and war. The table below, drawing heavily on the September 2022 policy statement, provides a sketch of North Korea's nuclear strategy and apparent theory of victory across the continuum of conflict.

⁴⁷ Ibid.

⁴⁸ Alexander Ward, "North Korea displays enough ICBMs to overwhelm U.S. defense system against them," Politico (February 8, 2023).

⁴⁹ Choe Sang-Hun, "North Korea Vows to Escalate Nuclear Threat Against the South," *The New York Times* (January 1, 2023).

⁵⁰ "Regarding the nuclear force policy of the Democratic People's Republic of Korea" (September 8, 2022).

Table 1. Kim Jong Un's Nuclear Strategy and Theory of Victory

	"Peacetime"	Crisis	War
Ends	<ul style="list-style-type: none"> • Break US hostile ways, isolate ROK 	<ul style="list-style-type: none"> • Deter escalation from crisis to war • Incentivize de-escalation 	<ul style="list-style-type: none"> • An outcome that meets the political requirements of the US and ROK • If DPRK employs nuclear weapons, regime removal
Ways	<ul style="list-style-type: none"> • Effectively safeguard national sovereignty, territorial integrity, and fundamental interests • Persuade US that aggression will lead to ruin and to recognize DPRK as a nuclear weapon state 	<ul style="list-style-type: none"> • Increase DPRK expected costs and risks of escalation • Decrease its expected benefits—especially its confidence in rapidly seizing the initiative • Focus PRC on DPRK escalation risks 	<ul style="list-style-type: none"> • Defeat efforts to seize the initiative • Defeat limited missile strikes • Achieve rapid conventional dominance • Destroy instruments of regime control
Means	<ul style="list-style-type: none"> • Establish a secure, effective retaliatory force • Constantly renew and strengthen those forces • Regularly update nuclear strategy • Display capabilities and resolve 	<ul style="list-style-type: none"> • Improved deep precision strike capabilities • Improved resilience against attacks in cyber space • Enhanced capacity for regional missile defense and US homeland "missile defeat" • Improved capacity to integrate multi-domain planning, operations • US strategic nuclear forces that pose visible, tangible threat • Allied "skin" in the nuclear "game" • A balance of conventional forces favoring the US and its allies 	

The Shifting Geopolitical Context

These developments in the strategic balance between the U.S.-ROK alliance and the DPRK are not the only factors influencing the stability of deterrence on the peninsula. At least three other factors stand out.

The war in Ukraine raises a significant new question about whether nuclear threats can be used to prevent the United States from defending important interests. Surveying the unwillingness of NATO in general and President Biden in particular to leave open the possibility of direct military assistance to Ukraine, some might conclude that President Putin's nuclear threats were seen as credible and were thus effective, leading others to draw similar conclusions. This may encourage Kim Jong Un to dismiss U.S. declaratory policy as mere bluff. It may also further discourage those in South Korea and Japan who are already discouraged by the possibility of U.S. retreat from their defense when faced with new nuclear threats.

The growing global divide between the democracies and the autocracies, as spearheaded by the Sino-Russian "friendship without limits," raises a significant new question about the degree of agency Kim Jong Un may perceive. He may judge that Beijing and Moscow would step into any mounting crisis to inhibit a strong American response, thereby reducing his expected cost and risk of direct confrontation with the United States.

The resurgence of a strain in American politics that dismisses allies as freeloaders and alliances as constraints on the exercise of American power raises a significant new question about the future willingness of the United States to run new nuclear risks on behalf of its allies. Many U.S. allies experienced first-hand President Donald Trump's evident disdain and transactional approach to alliances. For the first time they had to seriously contemplate their options if the United States withdrew from its security commitments to them. Their options are few and unattractive. Allies remain committed to their alliances with the United States while also recognizing that the U.S. commitment to those alliances is not as deep as before. This fuels their anxiety that the U.S. commitment may no longer be deep enough to run nuclear risks on their behalf. This too may encourage Kim Jong Un to think that the costs and risks of confrontation with the U.S.-ROK alliance are manageable.

A 2023 Net Assessment

The steps taken by the U.S.-ROK alliance to adapt and strengthen deterrence did not deter Pyongyang from developing nuclear weapons, crossing the nuclear threshold, or pursuing a nuclear force. But are they sufficient to deter Pyongyang from employing its weapons in war? If so, then they should also be sufficient to negate North Korean nuclear coercion in peacetime and crisis (by allowing us to ignore North Korean nuclear threats because they are not credible). Of course, only war can provide a definitive answer. Thus, we must form our own assessments. My own judgments include the following.

There is a serious risk that Kim Jong Un may now assess that the strategic advantages he has created for North Korea put him on an entirely new footing. Notably, Kim appears to have gained confidence as a result of North Korea's nuclear progress, as evidenced by both new provocations and efforts to test the resolve of the United States and Japan to stand by South Korea. He may also have concluded that broader geopolitical factors allow him increased agency. These judgments would seem to discount developments in the U.S.-ROK deterrence posture. At the very least, these factors seem likely to result in more attempts at nuclear-backed coercion and in new provocations aimed at testing the new balance of strategic power.

But will this result in war, including nuclear war? With a nuclear force capable of assured retaliation, Kim Jong Un may calculate, as Vladimir Putin appears to have done, that he can utilize his strategic nuclear force to create a sanctuary within which to commit aggression at the conventional level of war. A direct armed assault on the South to capture Seoul and try to dictate the terms of political settlement still seems very high risk for the North; but a limited incursion and limited escalation may now seem less risky than before—and perhaps acceptably risky given Kim Jong Un's stake in achieving his long-term geopolitical objectives.

In contemplating war, as opposed to provocations and tests, Kim cannot ignore the new strategic advantages of the U.S.-ROK alliance, which should have a significant impact on his assessments of the benefits, costs, and risks of different courses of action. Relative to a decade or two ago, the alliance has improved means to deny Pyongyang the benefits of attack. North Korea's hope to de-couple the United States from the defense of its allies in Northeast Asia by threatening the American homeland with nuclear attack is largely negated with the protection of the homeland by missile defenses. Its hope of persuading Japan not to support the U.S. defense of the ROK with limited missile attacks has been largely negated with Japan's missile defense.

The alliance also has improved means to impose costs and risks on Pyongyang. Any North Korean nuclear attack would bring with it the certainty of a regime-threatening massive conventional response by the ROK. It would also bring Pyongyang face-to-face with the U.S. promise to use all of its considerable power to remove the regime in Pyongyang in such a circumstance. This could credibly include a nuclear response by the United States, as it retains (and is modernizing) the capability to employ strategic nuclear systems on behalf of its allies at any time and manner of its choosing. The United States also retains (and is modernizing) the capability to forward-deploy nuclear weapons in the region and on the peninsula if needed in crisis and war. Thus, Kim Jong Un cannot confidently predict that he can both employ nuclear weapons and see his regime survive.

Central to Kim's calculus must be judgments about the resolve of the United States to run nuclear risks on behalf of South Korea and Japan and about his ability to break that resolve without resorting to war. Such judgments are formed on the basis of observed behaviors in other contexts; in this regard, the alliance's track record in adapting and strengthening deterrence should send an impactful message of resolve. But it is all too plausible that Kim

might conclude that U.S. resolve is weak and easily broken, as such judgments have often been made by autocrats, who often perceive democracies to be fearful and easily divided (thus the record of the 1930s).⁵¹

In sum, the U.S.-ROK deterrence posture is fit for the purpose of deterring DPRK nuclear attack. It is also fit for the purpose of deterring other strategic attacks by non-nuclear means. For the purpose of deterring nuclear-backed conventional provocations, it is likely as fit as it can be. For the purpose of preventing miscalculation of resolve, the alliance's track record of adapting and strengthening should prove significant. But the balance of capabilities and resolve is dynamic, and these judgments are all open to future reconsideration based on new circumstances. The alliance's pursuit of new strategic advantage must continue.

Next Steps in Adapting and Strengthening Deterrence

Going forward from here, the U.S.-ROK alliance faces two main imperatives: to reinvigorate the bilateral nuclear consultative process and to ensure the timely delivery of future capabilities creating strategic advantage for the regional deterrence architecture.

Reinvigoration of the consultative process is necessary for various reasons. Many stakeholders perceive that it has lost momentum and no longer serves well the original purpose of generating shared understanding of emerging challenges as well as of the necessary responses.⁵² Unlike nuclear dialogues with other allies, it has not produced new cadres of enduring expertise in either government or a community of experts in the analytical community. It also appears to be less effective than hoped in meeting the assurance requirements of South Koreans.

Reinvigoration requires institutional refinements to existing practices beyond the scope of this paper. It requires also significant substantive work. Two important new tasks should be put in front of the reinvigorated consultative process.

The first new task relates to theories of victory. North Korea's elaboration of coherent theories of victory for peacetime, crisis, and war require corresponding theories from the U.S.-ROK alliance. The alliance must have a set of concepts about how it can safely defend its interests while defeating North Korea's strategy and theory of victory. The absence of such concepts in the U.S. defense community was a primary subject of concern for the U.S. National Defense Strategy Commission, as noted in its most recent quadrennial report. Published in late 2018, the report concluded that the United States could well lose a war against a nuclear-armed

⁵¹ Robert Kagan, "The America trap: Why our enemies often underestimate us," *The Washington Post* (January 19, 2023).

⁵² Based on private communications between the author and both civilian and military experts in both Seoul and Washington.

challenger.⁵³ Many of the elements of such a strategy and theory can be found in documents generated by the alliance and statements by its leaders. But, to the best of my knowledge, they have not been set out in a coherent whole anywhere. Table 2 offers one way to think about this.

Table 2. Toward a U.S.-ROK Multi-Domain Strategy and Theory of Victory

	Peacetime Competition & Conflict	Crisis	War
Ends	<ul style="list-style-type: none"> KJU becomes convinced that any nuclear employment would bring disaster (and thus that the US and its allies can safely ignore his nuclear threats) and that cooperation can serve some of his interests 	<ul style="list-style-type: none"> Deter escalation from crisis to war Incentivize de-escalation 	<ul style="list-style-type: none"> An outcome that meets the political requirements of the US and ROK If DPRK employs nuclear weapons, regime removal
Ways	<ul style="list-style-type: none"> Sustain and strengthen alliances Strengthen and adapt deterrence to ensure DPRK gains no new coercive leverage Ensure an ever-present off-ramp Focus PRC on crisis avoidance 	<ul style="list-style-type: none"> Increase DPRK expected costs and risks of escalation Decrease its expected benefits—especially its confidence in rapidly seizing the initiative Focus PRC on DPRK escalation risks 	<ul style="list-style-type: none"> Defeat efforts to seize the initiative Defeat limited missile strikes Achieve rapid conventional dominance Destroy instruments of regime control

⁵³ *Providing for the Common Defense: The Assessments and Recommendations of the National Defense Strategy Commission* (November 13, 2018).

Means	<ul style="list-style-type: none"> • Declaratory policy establishing regime termination as goal if nuclear threshold is crossed • Concrete steps to build strategic advantage 	<ul style="list-style-type: none"> • Improved deep precision strike capabilities • Improved resilience against attacks in cyber space • Enhanced capacity for regional missile defense and US homeland “missile defeat” • Improved capacity to integrate multi-domain planning, operations • US strategic nuclear forces that pose visible, tangible threat • Allied “skin” in the nuclear “game” • A balance of conventional forces favoring the US and its allies
--------------	---	--

The second new task relates to deterrence campaigns. Building on a key element of the Biden administration’s National Defense Strategy (NDS), the alliance must develop a combined campaign plan for deterrence. Such campaigns encompass day-to-day activities in peacetime, crisis, and war to shape the adversary’s assessments of the benefits, costs, and risks of different courses of action. They must encompass the full DIME (diplomatic, informational, military, and economic factors) spectrum and thus are not just for the military community to craft and implement.⁵⁴ This would build on but go beyond the alliance’s tailored deterrence strategy to guide daily activities.

The second main imperative is to develop a long-term strategy for competition with North Korea for strategic advantage. More precisely, the alliance must develop a combined acquisition plan for this purpose. But before it can do so, it needs clarity about the core elements of such a strategic posture and how to sustain them over time in competition with a nuclear-arming North Korea.

One part of this plan must address the alliance’s need for improvements to the capabilities for extended nuclear deterrence. Such improvements are needed due to advancements made by North Korea in its integrated air and missile defense capabilities. These developments call into question the future effectiveness of dual-capable aircraft armed with gravity bombs and point to the utility of a stand-off capability. They are also needed because of the waning credibility of the U.S. promise to make globally available in time of crisis and war fighters armed with nuclear bombs, if required. In a world marked by a rising risk of opportunistic aggression, and with it the risk of simultaneous nuclear crises in both Asia and Europe, it seems unlikely that some of all of U.S. DCA based in Europe would be dispatched elsewhere amidst mounting crises. Heavy bombers are useful supplements to forward-deployable non-strategic systems but are not a substitute, as they do not convey the resolve of U.S. allies to defend their interests when faced with nuclear risk.

⁵⁴ Kevin Chilton and Greg Weaver, “Waging Deterrence in the Twenty-First Century,” *Strategic Studies Quarterly* (Spring 2009), pp31-42.

The U.S.-ROK alliance can accomplish a great deal to meet these two imperatives. However, the alliance cannot fully accomplish its objectives when working in isolation. Others in the region contribute in essential ways to the regional deterrence architecture—especially Japan but increasingly also Australia. Thus, the bilateral U.S.-ROK alliance needs to enable and pursue the necessary trilateral (with Japan) and quadrilateral (with Australia) cooperative activities. Such activities are essential to the next steps in adapting and strengthening deterrence. The political divisions between the ROK and Japan are obvious targets for North Korean nuclear-backed coercion. Moreover, many of the multi-domain solutions to the challenges of deterrence and assurance on the Korean peninsula will not be found on the peninsula alone. Integration across these divides may be impossible, but improved cooperation through increased institutionalization may produce the needed coherence across the alliance structures. Reinivigation thus also requires experimentation with a broader framework.

The New Challenges of Nuclear Risk Reduction

North Korea's pursuit of a standing nuclear deterrent is generating significant new nuclear risk in the region, as is China's rapid build-up and diversification of its nuclear forces. In addition, a continued effort by the U.S.-ROK alliance to adapt and strengthen deterrence can be expected to have complex effects in the multidimensional Northeast Asian security environment. Some will be positive, in the sense that they reduce the risks of nuclear-backed coercion and aggression. Others will be negative, in the sense that they generate second and third order effects that have to be managed.

In the context of the confrontation between the DPRK and the U.S.-ROK alliance, the alliance's continued progress in adapting and strengthening deterrence should have the effect of reducing nuclear dangers. It should ensure that the credibility of North Korean nuclear threats remains low, thus reducing the vulnerability of the United States, the ROK, and others in the region to coercion. It should also ensure that Kim cannot be confident in his calculus of the benefits, costs, and risks of different courses of action that bend in favor of aggression against the South. To secure these benefits for the alliance requires exercises and demonstrations that Kim will complain raise nuclear risk; they do—for him. This combination of effects may lead him to conclude, over time, that his interests are better served by his own version of détente than by continued competition with the United States and its alliances. It may also lead him to conclude that substantive strategic stability dialogue with the United States could serve his interests. In the interim, Kim may come to see risk management mechanisms as useful, such as arrangements for missile launch notifications, hotlines, a renewal of the Comprehensive Military Agreement, or even an update to the armistice.

In the context of the confrontation between China and the United States, the continued U.S. pursuit of strategic advantage over North Korea will be unwelcome and disruptive. China's leaders will infer that the pursuit of strategic advantage over North Korea is simply a ruse that masks the true intentions of the United States to pursue strategic advantage over China. They

will strongly object to any strengthening of the extended nuclear deterrent. After all, they believe that any improvement to U.S. alliance structures in the region will ultimately prove to their disadvantage. A strategy to address China's concerns would include both strategic dialogue and improved mutual transparency—both already rejected by China. Many U.S. experts have concluded that China's leaders are not interested in having its concerns addressed, as they find it useful to explain China's troubles by blaming others. So long as China remains unwilling to engage in sustained, substantive, and high-level dialogue on the strategic stability implications of North Korea's growing nuclear force, there is little that the United States can do cooperatively with China to reduce nuclear dangers. Instead, it must work with its allies and partners to do what they can together to understand and reduce those dangers.

This leads to the simple conclusion that the alliance's strategy to reduce nuclear dangers must, for the time being, rely more on deterrence than dialogue with Pyongyang or Beijing. But dialogue among the United States and its allies and partners has something valuable to contribute in developing new concepts and approaches.

Conclusions

There is a plausible alternative to a South Korean bomb. The U.S.-ROK alliance has not been idle—indeed, it has accomplished a great deal. It has long anticipated the possible emergence of a nuclear-armed North Korea and the process of adapting and strengthening deterrence is well advanced. But nor has North Korea been idle. Thus, it is necessary that the allies take additional steps to adapt and strengthen deterrence. They must reinvigorate the bilateral nuclear consultative process by taking on some important new work related to theories of victory, deterrence campaigns, and long-term competition for strategic advantage. With sufficient political resolve and sustained leadership focus, continued success—in the form of credible deterrence of nuclear and other strategic attacks by North Korea—is within their reach.

China's Rise and Nuclear Debate in Korea

Manseok Lee

The current debate concerning South Korea's nuclear armament is arguably one of the most pressing policy issues in U.S.–Republic of Korea (ROK) relations. While this issue has been persistently raised over the past decade as a result of North Korea's growing nuclear capabilities, the present situation reflects a departure from the past because the debate has become more mainstream. Previously, it was considered taboo to discuss the prospect of South Korea's own nuclear weapons; today, however, the public, politicians, and prominent experts are participating in the discussion. The nuclear debate should not be viewed as an effort to garner public support. Rather, politicians and foreign policy experts are responding to a shift in public opinion, as more than 70% of South Koreans now appear to support a domestic nuclear program.⁵⁵ The debate has now moved beyond a simple call for the acquisition of nuclear weapons. Currently, the focus is on how South Korea could develop such weapons from a political and technical standpoint.

In this volume, Brad Roberts finds that South Korea's desire to have its own nuclear deterrent is mainly influenced by two factors that have risen doubts about the United States's credibility as a security guarantor. The first *factor* is a strain in U.S. politics that views alliances as constraints on American power, leading many allies to question the depth of U.S. commitment. The second factor is the Ukraine war, which has demonstrated that nuclear threats can be effective in preventing the United States from defending its interests. This has caused allies to worry that other nuclear-armed challengers may also use this tactic, further eroding U.S. credibility as a security provider. Roberts does not, however, address the impact of China's rise and the intensifying U.S.–China strategic competition on the South Korean nuclear debates.

This chapter aims to examine how the simultaneous **emergence** of China and North Korea as significant threats has led to divergent threat perceptions between the United States and South Korea: the United States has prioritized China as its **greatest** threat, while South Korea has prioritized North Korea as its most imminent and existential threat. Due to these differing threat perceptions, South Korean experts are concerned that the United States may be unwilling to respond with all-out efforts in the event of a nuclear conflict with North Korea, as

⁵⁵ Tobi Dalton, Karl Friedhoff, and Lami Kim, "Thinking Nuclear: South Korean Attitudes on Nuclear Weapons," Carnegie Endowment and Chicago Council on Global Affairs (February 2022). <https://globalaffairs.org/sites/default/files/2022-02/Korea%20Nuclear%20Report%20PDF.pdf>. Accessed March 14, 2023.

using all its strength in the North Korean crisis would make it difficult for the U.S. to win the strategic competition with China over Asia and the world order. Such concern has led South Koreans to believe that they need their own nuclear deterrent. Meanwhile, the United States expects that South Korea may not actively participate in any possible conflicts with China, such as in the event of China's invasion of Taiwan. This stance has increased Washington's discontent with South Korea's commitment to U.S. regional strategy.

To examine such dynamics, this chapter employed a mixed-methods research approach that combines document review, field visits, and interviews to gather the evidence base. More specifically, a targeted review was conducted of open-source literature related to U.S. and South Korean perspectives, including national strategies and other government documents (e.g., U.S. National Security Strategies and South Korea's Defense White Papers), in addition to relevant academic, think tank, and specialist news media sources. The other primary means of data collection used for this chapter was field visits conducted in South Korea. These visits provided opportunities to conduct interviews with both active and retired South Korean officials, as well as with journalists, academics, and think-tank researchers.

The remainder of this chapter is organized as follows. In the next section, this chapter examines in greater depth the ongoing debates regarding South Korea's nuclear armament. The following section describes the rise of both China and North Korea in the Asia-Pacific region, while the fourth section explains how the United States and South Korea have come to develop different threat perceptions. The fifth section elucidates the process behind the development of the divergent threat perceptions and policy priorities. Finally, the concluding section discusses the key findings of this chapter.

Mainstreaming Nuclear Debates in South Korea

North Korea has long engaged in a pattern of provocative actions intended to both intimidate and demonstrate its strength to newly inaugurated South Korean governments. and demonstrate its strength. The Yoon government has been no exception to this pattern of provocations. In May 2022, shortly after President Yoon was inaugurated, North Korea test-launched three rounds of short-range ballistic missiles (SRBMs) on May 12, followed by a Hwasung 17 intercontinental ballistic missile (ICBM) and two additional rounds of KN-23 SRBMs—the North Korean version of the Iskander—on May 25. Between May and December

2022, North Korea launched a total of 27 missiles, including a variety of ICBMs, intermediate range ballistic missiles (IRBMs), SRBMs, and multiple launch rocket systems (MLRS).⁵⁶

In response, the Yoon government bolstered its defense posture against North Korea's nuclear and missile threats by emphasizing the "three-axis system." This involves a kill chain for preemptive strikes, South Korea's missile defense system, and massive punishment and retaliation (MPR).⁵⁷ At the same time, South Korea responded by calling for the introduction of U.S. nuclear weapons or NATO-style nuclear sharing with the United States as a means of enhancing the credibility of the U.S. extended deterrence and boosting its counter-nuclear readiness. The response from the Korean public has been more active, with a growing number of South Koreans calling for nuclear armament. Indeed, a poll conducted by the Carnegie Endowment and the Chicago Council on Global Affairs in 2022 found that 71% of South Koreans believed that Seoul should develop its own nuclear arsenal.⁵⁸ The debate concerning nuclear weapons is not new in Korea, although it has grown steadily over the past decade.⁵⁹ Between 2010 and 2010, the Asan Institute measured a change in views among South Koreans during this period in its *Fundamentals of South Korean Public Opinion* report: while the percentage of people who supported ROK developing its own nuclear weapons increased over the course of a decade, the percentage of people who opposed U.S. deployment of nuclear weapons to ROK increased.⁶⁰

A recent significant development in the nuclear armament debate in South Korea, however, is the fact that not only the public but also politicians, experts, and even government officials are now actively participating in the discussion. This represents a departure from the past, where the topic was considered taboo and only discussed among a select group of politicians and experts. By contrast, the current conversation has become more mainstream, with members of the ruling party openly advocating for South Korea to acquire nuclear weapons. This position

⁵⁶ "North Korean Missile Launches & Nuclear Tests: 1984-Present," CSIS Missile Defense Project (updated = December 19, 2022). <https://missilethreat.csis.org/north-korea-missile-launches-1984-present/>. Accessed March 14, 2023.

⁵⁷ For the detailed information about the three-axis system, see Manseok Lee and Hyeonpil Ham, "South Korea's Conventional Forces Buildup: The Search for Strategic Stability" War on the Rocks (April 16, 2021). <https://warontherocks.com/2021/04/south-koreas-conventional-forces-buildup-the-search-for-strategic-stability/>. Accessed March 14, 2023.

⁵⁸ Dalton, Friedhoff, and Kim, "Thinking Nuclear."

⁵⁹ Refer to Karl Friedhoff, "Longitudinal Attitudes in South Korea on Nuclear Proliferation," Korea Economic Institute (KEI) (February 16, 2023). <https://keia.org/the-peninsula/longitudinal-attitudes-in-south-korea-on-nuclear-proliferation/>. Accessed March 14, 2023.

⁶⁰ J. Kim, K. Chungku, and H.G. Hee, *Fundamentals of South Korean Opinion on Foreign Policy and National Security*, Asan Institute for Policy Studies (September 2021).

aligns with the opinion of approximately two-thirds of the South Korean public, who consistently support the introduction of a domestic nuclear weapons program. Furthermore, President Yoon has acknowledged the potential of acquiring nuclear weapons as a future policy option. While he later changed his stance—stating that South Korea will continue to abide by the NPT regime, his initial remarks have contributed to the increasing support for South Korea going nuclear.

Yet, it is clear that the mainstreaming of the nuclear debate in South Korea should not be viewed as an attempt to generate public support for the acquisition of nuclear weapons. Rather, politicians and foreign policy experts alike are now acknowledging and responding to public sentiment regarding the issue. Thus, the nuclear armament debate in South Korea has progressed beyond generic calls for the acquisition of nuclear weapons, with attention now being paid to how South Korea would acquire nuclear weapons, both politically and technically. It is likely that specific details concerning such a plan will emerge soon.⁶¹

A nuclear move on the part of South Korea could trigger a nuclear domino effect in the Asia-Pacific region, as Japan and Taiwan might follow suit. Japan, which still exhibits strong opposition to nuclear weapons due to its experience of the atomic bombings of Hiroshima and Nagasaki, has stated that it currently has no intention of developing nuclear weapons or sharing such weapons with the United States. However, if South Korea were to pursue nuclearization, Japan may feel compelled to develop its own nuclear weapons as a deterrent against potential regional threats. If Japan were to develop nuclear weapons, such a move may place pressure on Taiwan to do the same, as it already faces a threat due to China's increasing military coercion. If U.S. allies in the region were to acquire nuclear weapons, China and North Korea may respond to the nuclear domino effect by strengthening their own theater nuclear forces. This would create an unstable situation in the Asia-Pacific region and be detrimental to the global

⁶¹ See Stephen Herzog and Lauren Sukin, "The Dueling Nuclear Nightmares Behind the South Korean President's Alarming Comments," Carnegie Endowment for International Peace (January 25, 2023), <https://carnegieendowment.org/2023/01/25/dueling-nuclear-nightmares-behind-south-korean-president-s-alarming-comments-pub-88879> (accessed March 14, 2023); Daniel R. Depetris, "South Korea's Never-Ending Nuclear Weapons Debate," *Newsweek* (February 10, 2023), <https://www.newsweek.com/south-koreas-never-ending-nuclear-weapons-debate-opinion-1779938> (accessed March 14, 2023); Junnosuke Kobara and Shunsuke Shigeta, "Nuclear Weapons Enter South Korean Political Debate as Threats Grow," *Nikkei Asia* (February 5, 2023), <https://asia.nikkei.com/Politics/Defense/Nuclear-weapons-enter-South-Korean-political-debate-as-threats-grow> (accessed March 14, 2023); Dasl Yoon, "South Korea Revives Nuclear Debate as Tensions With the North Rise," *The Wall Street Journal* (January 5, 2023), <https://www.wsj.com/articles/south-korea-revives-nuclear-debate-as-tensions-with-the-north-rise-11672923760> (accessed March 14, 2023).

nonproliferation regime, making it worthwhile to investigate the causes of the nuclear debate in Korea as well as possible policy alternatives for mitigating the risk of proliferation.

Why, then, is there an increasing demand for nuclear armament in South Korea? The most fundamental reason is North Korea's rapidly increasing missile and nuclear capabilities. However, the issues triggered by the intensifying U.S.–China competition tend to spark further debates concerning South Korea's nuclear armament. In the following sections, the details of the related dynamics will be investigated.

Strategic Context

The rise of China as a “peer-competitor” to the United States, along with North Korea's rapidly growing nuclear capabilities, represent two of the most important developments in the Asia-Pacific regional system over the last two decades. China is now a serious competitor to the United States in the Asia-Pacific region as well as a peer in certain domains, although the United States's position as the global superpower remains unchallenged. Yet, the fact that the gap between the United States and China is closing rather than growing is alarming U.S. strategists. At the same time, North Korea is posing a double threat to South Korea (with its tactical nuclear weapons) and to the U.S. mainland [with its intercontinental ballistic missiles (ICBMs)]. This section discusses these two significant developments that have had a profound impact on the U.S.-ROK alliance.

Development #1: China's Rise as a Peer-Competitor to the United States in the Asia-Pacific

The prevailing consensus in Washington is that China is on track to surge past the United States in the coming years. Indeed, there is plenty of evidence to support this view.⁶² First, China's economy has increased by a factor of 10, growing from \$1.2 trillion in 2000 to \$17.7 trillion by 2021. During this time, China's real gross domestic product (GDP) growth rate has averaged 8.7% per year (based on 10.3% in the first decade and 7.2% in the second). Comparatively, the U.S. economy grew from \$10.3 trillion in 2000 to \$24.0 trillion in 2021, and its real GDP growth averaged just 2% per year. This means that China has sustained fast economic growth over the past two decades, growing at an average rate of four times that of the United States.

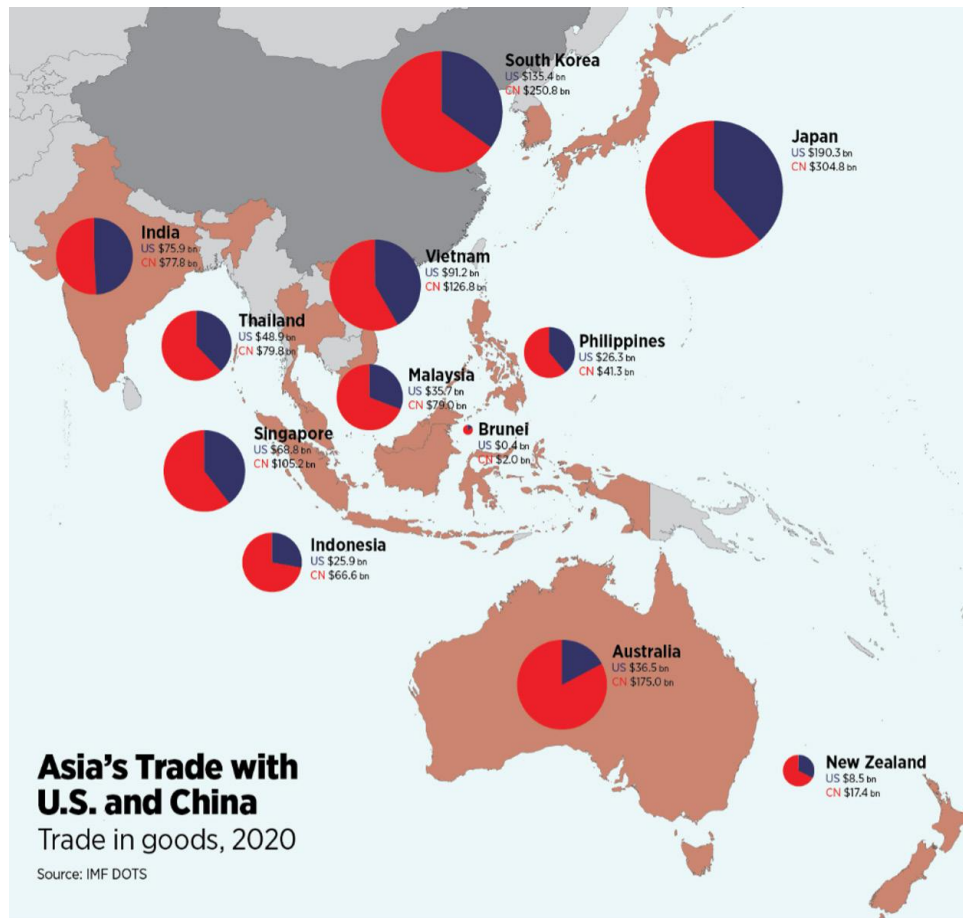
⁶² This research draws on Graham Allison's paper series concerning the great rivalry between the United States and China as evidence of China's rise as a peer-competitor to the U.S. See Graham Allison, “The Great Rivalry: China vs. the US in the 21st Century,” Belfer Center for Science and International Affairs, Harvard Kennedy School, (December 7, 2021), <https://www.belfercenter.org/publication/great-rivalry-china-vs-us-21st-century> (accessed March 14, 2023).

Consequently, in terms of the purchasing power parity (PPP), China's GDP in 2000 was 36% that of the United States, yet it reached 115% the size of the U.S. economy in 2020.⁶³

As China's economy continues to grow, an increasing number of states have come to rely on trade with China. As shown in Figure 1, China has now surpassed the United States as the largest trading partner for nearly all the major Asia-Pacific states. Moreover, following the launch of the Regional Comprehensive Economic Partnership (RCEP) in January 2022, China has also become the leader of the largest free-trade bloc in the world. The RCEP establishes a trading bloc in the Asia-Pacific region that consists of China, Japan, South Korea, Australia, New Zealand, and the 10 members of the Association of Southeast Asian Nations (ASEAN), thereby representing a population of 2.2 billion people. This new bloc comprises nearly one-third of the global GDP, making it the largest free-trade zone in the world.

⁶³ "World Economic Outlook Database," International Monetary Fund (April 2021). <https://www.imf.org/en/Publications/WEO/weo-database/2021/April>. Accessed March 14, 2023.

Figure 1. Comparison of the Asia-Pacific States' Trade with the United States and China



Source: "Asia's Trade with U.S. and China: Trade in goods, 2020," International Monetary Fund, Direction of Trade Statistics, quoted in Graham Allison, Nathalie Kiersznowski and Charlotte Fitzek, "The Great Economic Rivalry: China vs the US," Belfer Center for Science and International Affairs, Harvard Kennedy School, March 2022, p16. Accessed September 8, 2022.

Beyond developing into an economic powerhouse, China has emerged as a serious competitor in terms of foundational and advanced technologies such as artificial intelligence (AI), 5G networks, and quantum information science (QIS).⁶⁴ For example, Chinese financial and human

⁶⁴ "Military and Security Developments Involving the People's Republic of China," Department of Defense (November 3, 2021), <https://media.defense.gov/2021/Nov/03/2002885874/-1/-1/0/2021-CMPR-FINAL.PDF> (accessed March 14, 2023); Kate O'Keeffe, "Counterintelligence Head Narrows Focus to Five Technologies Critical to US Dominance," *The Wall Street Journal* (October 22, 2021), <https://www.wsj.com/articles/counterintelligence-head-narrows-focus-to-five-technologies-critical-to-u-s-dominance-11634907600> (accessed March 14, 2022); Kelley M. Saylor, "Emerging Military Technologies: Background and Issues for Congress," Congressional Research Service (October 21, 2021), <https://sgp.fas.org/crs/natsec/R46458.pdf> (accessed March 14, 2023); Eric Schmidt, "Emerging Technologies and Defense: Getting the Fundamentals Right," Testimony Before the Senate Committee on Armed

capital investments in AI research and development have moved ahead of the United States, and the results of such investments are now beginning to emerge. One indicator is that China surpassed the United States with regard to overall AI citations in 2021, with a 35% increase from 2019.⁶⁵ Another is that China has also published six times as many patents as the United States in deep learning, which is currently the hottest subfield of AI.⁶⁶ In addition, China is already a leader in innovative 5G network applications, including smart factory systems, remote surgeries, and digital farming.⁶⁷ Furthermore, China is looking ahead to the next generation of mobile communications. It holds 35% of all 6G network patents, whereas the United States holds only 18%.⁶⁸ In the QIS sector, which consists of three main subfields (namely quantum computing, quantum communication, and quantum sensing), China is also catching up to the United States.⁶⁹ In terms of quantum-related patents, the United States and China were tied in 2014, while China came in second place to the United States in relation to annual spending on quantum technology research in 2015.⁷⁰ However, China overtook the United States in 2018, filing more than twice as many patents and accounting for 52% of all quantum patents. The country now spends four times as much as the United States on QIS.⁷¹ In short, as the U.S.-China Economic and Security Review Commission notes, “China has reduced the technological gap with the United States ... in which the United States has long held a dominant position.”⁷²

Services (February 23, 2021), https://www.armed-services.senate.gov/imo/media/doc/Schmidt_02-23-21.pdf (accessed March 14, 2023).

⁶⁵ “2021 AI Index Report,” Stanford Institute for Human-Centered Artificial Intelligence (March 2021). <https://aiindex.stanford.edu/report/>. Accessed March 14, 2023.

⁶⁶ Graham Allison et al., “The Great Tech Rivalry: China vs the US,” Belfer Center for Science and International Affairs, Harvard Kennedy School (December 2021), p6-7. <https://www.belfercenter.org/publication/great-rivalry-china-vs-us-21st-century>. Accessed March 14, 2023.

⁶⁷ “Varied Sectors Embrace 5G Transformation,” *China Daily* (September 5, 2022). <http://global.chinadaily.com.cn/a/202209/02/WS63115e0ea310fd2b29e7595b.html> (accessed March 14, 2023); “5G Use Cases for Vertical China 2021,” GSMA and the China Academy of Information and Communications Technology (2021), <https://www.gsma.com/greater-china/wp-content/uploads/2021/02/5G-Use-Cases-for-Vertical-China-2021-EN.pdf> (accessed March 14, 2023).

⁶⁸ Zeyi Yang, “China Holds 35% of Global 6G Patents, Government Report Says,” *Protocol* (April 26, 2021). <https://www.protocol.com/china/china-6g-patents>. Accessed March 14, 2023.

⁶⁹ Allison et al., “The Great Tech Rivalry: China vs the US,” p14-20; Elsa B. Kania, “China’s Quantum Future,” *Foreign Affairs* (September 26, 2018), <https://www.foreignaffairs.com/articles/china/2018-09-26/chinas-quantum-future> (accessed March 14, 2023).

⁷⁰ “Quantum Technology is Beginning to Come into Its Own,” *Economist* (March 11, 2017). <https://www.economist.com/technology-quarterly/2017/03/09/quantum-technology-is-beginning-to-come-into-its-own>. Accessed March 14, 2023.

⁷¹ Allison et al., “The Great Tech Rivalry: China vs the US,” p15.

⁷² US-China Economic and Security Review Commission, *Report to Congress of the US-China Economic and Security Review Commission* (2017). <https://www.uscc.gov/annual-report/2017-annual-report-congress>. Accessed March 14, 2023.

China's growing economic power and technological capacity have served as substantial resources for its rapid military modernization, and today it has emerged as a near-peer military competitor to the United States in the Asia-Pacific region. In fact, China's military strength has grown beyond the so-called anti-access, area-denial (A2/AD) capabilities aimed at thwarting United States power projection and has now moved into operations staged from Asian locations.

In the 2018 National Defense Strategy, former Secretary of Defense James Mattis bluntly states, that "For decades the U.S. has enjoyed uncontested or dominant superiority in every operating domain. We could generally deploy our forces when we wanted, assemble them where we wanted, and operate how we wanted."⁷³ Yet he goes on to warn that "Today, every domain is contested—air, land, sea, space, and cyberspace."⁷⁴ As Mattis mentions, China has built substantial capabilities in all these domains.⁷⁵ China currently deploys more than 2,700 combat aircraft and is developing fifth-generation stealth aircraft (i.e., J-20 and J-31). Its navy is also expanding (see Table 1). In 2010, China only had around 210 battle force ships, but that number increased to around 360 ships in 2020 (more than the U.S. Navy's entire number of battle force ships). Moreover, that number is expected to reach more than 400 by 2025. While this is a one-dimensional measure that excludes numerous other factors affecting a navy's capabilities and how those capabilities compare to its assigned missions, the trend in the relative numbers of ships over time can shed light on how the relative balance of U.S. and Chinese naval capabilities may be shifting.⁷⁶

⁷³ U.S. Department of Defense, *Summary of the 2018 National Defense Strategy of the United States of America: Sharpening the American Military's Competitive Edge* (2018), p3.

<https://dod.defense.gov/Portals/1/Documents/pubs/2018-National-Defense-Strategy-Summary.pdf>. Accessed March 14, 2023.

⁷⁴ U.S. Department of Defense, *Summary of the 2018 National Defense Strategy of the United States of America*, p3.

⁷⁵ International Institute for Strategic Studies, *The Military Balance* (London: Routledge, 2021).

⁷⁶ "China Naval Modernization: Implications for US Navy Capabilities—Background and Issues for Congress," Congressional Research Service (last updated December 1, 2022). <https://sgp.fas.org/crs/row/RL33153.pdf>. Accessed March 14, 2023.

Table 1. Numbers of Chinese and U.S. Navy Battle Force Ships, 2000–2030

	2000	2005	2010	2015	2020	2025	2030
Ballistic missile submarines	1	1	3	4	4	6	8
Nuclear-powered attack submarines	5	4	5	6	7	10	13
Diesel attack submarines	56	56	48	53	55	55	55
Aircraft carriers, cruisers, destroyers	19	25	25	26	43	55	65
Frigates, corvettes	38	43	50	74	102	120	135
Total Chinese navy battle force ships, including types not shown above	210	220	220	255	360	400	425
Total US Navy battle force ships	318	282	288	271	297	n/a	n/a

Source: “China Naval Modernization: Implications for US Navy Capabilities—Background and Issues for Congress,” Congressional Research Service (last updated December 1, 2022).

<https://sgp.fas.org/crs/row/RL33153.pdf>.

China is also modernizing its nuclear force at an alarming rate. In fact, as Brad Roberts notes, “China is not only modernizing its nuclear forces, it is diversifying them and increasing their numbers.”⁷⁷ China has maintained roughly 20 silo-based ICBMs over the course of the last few decades. However, new information indicates that it may be building more than 200 new missile silos.⁷⁸ This expansion is going to significantly change China’s small and mostly land-based arsenal. In addition to more silo-based ICBMs, China is also building road-mobile ICBMs and strategic nuclear submarines. Moreover, it is introducing airborne nuclear weapons.⁷⁹ If China maintains the current pace of its nuclear expansion, the U.S. Department of Defense

⁷⁷ Brad Roberts, “China and the 2021 US Nuclear Posture Review,” Testimony Before the US-China Economic and Security Review Commission (June 10, 2021). https://www.uscc.gov/sites/default/files/2021-06/Brad_Roberts_Testimony.pdf. Accessed March 14, 2023.

⁷⁸ Matt Korda and Hans Kristensen, “China Is Building A Second Nuclear Missile Silo Field,” Federation of American Scientists (July 26, 2021). <https://fas.org/blogs/security/2021/07/china-is-building-a-second-nuclear-missile-silo-field/>. Accessed March 14, 2023.

⁷⁹ For example, China’s navy is seeking to acquire more nuclear-powered ballistic missile submarines. China is currently operating Type 094 submarines, which are equipped with JL-2 ballistic missiles with a range of approximately 7,200 kilometers. This range would necessitate the submarines operating around Hawaii in order to reach the U.S. mainland. Yet China is developing a newer kind of submarine, the Type 096, which is intended to be paired with a new type of ballistic missile, the JL-3, capable of reaching the U.S. mainland from Chinese waters. Moreover, the H-6N, the latest version of China’s H-6 strategic bomber, has been adopted by the Chinese air force. The H-6N is capable of aerial refueling, which increases its range, and can carry ballistic missiles to be launched from the air.

predicts that it may have up to 700 deliverable nuclear warheads by 2027 and 1,000 such warheads by 2030.⁸⁰

Finally, China is addressing its comparative weaknesses, including its anti-submarine warfare (ASW) and intelligence, surveillance, and reconnaissance (ISR) capabilities. It is also investing in emerging technologies such as electronic warfare, space, and cyber technologies. For example, the country is enhancing its anti-submarine operations capabilities by acquiring more ASW helicopters and upgrading the sonar systems of its surface ships. To improve its ISR capabilities, China has launched more than 120 satellites while also expanding its BeiDou precision, navigation, and timing system as an alternative to the Global Positioning System (GPS). Furthermore, China is increasingly aligning advanced technologies with warfighting concepts in an effort to exploit the possibilities of emerging technologies. In 2015, China established its Strategic Support Force, which centrally coordinates and integrates the Chinese military's space, cyber, and electronic warfare capabilities into a single warfighting concept. China is also keen to absorb and integrate civilian technologies.⁸¹ According to a report by the U.S.-China Economic and Security Review Commission, as part of China's military reforms since 2016, Beijing has prioritized "military-civil fusion," which seeks to facilitate technological transfers between the defense and civilian sectors to support defense-related innovation—and ultimately to lessen China's dependence on foreign military technologies.⁸²

Development #2: North Korea's Fast Growing Nuclear Capabilities

Since its second nuclear test in 2009, the character of the threat posed by North Korea has changed. Prior to 2009, North Korea's nuclear weapons development had proceeded at a deliberate pace and was perceived as a diplomatic card intended to garner international assistance rather than an existential threat to South Korea's security.⁸³ However, after North

⁸⁰ "Military and Security Developments Involving the People's Republic of China," Department of Defense (November 3, 2021). <https://media.defense.gov/2021/Nov/03/2002885874/-1/-1/0/2021-CMPR-FINAL.PDF>. Accessed March 14, 2023.

⁸¹ Robert Work and Greg Grant, "Beating Americans at Their Own Game: An Offset Strategy with Chinese Characteristics," Center for a New American Security (June 2019). <https://www.cnas.org/publications/reports/beating-the-americans-at-their-own-game>. Accessed March 14, 2023.

⁸² US-China Economic and Security Review Commission, *2019 Report to Congress* (November 2019), p136. <https://www.uscc.gov/annual-report/2019-annual-report-congress>. Accessed March 14, 2023.

⁸³ In the 1980s, North Korea began to develop nuclear weapons. During the same period, North Korea constructed nuclear facilities in Yongbyon, including plutonium reprocessing facilities, which allowed it to produce nuclear materials for the development of nuclear weapons. Following the dissolution of the Soviet Union in 1991, North Korea escalated the nuclear crisis in an effort to shape the conditions for its negotiations with the United States.

Korea withdrew from the Six-Party Talks and repelled the International Atomic Energy Agency (IAEA) as well as U.S. agents from the Yongbyon nuclear complex in 2009, it clearly signaled that it was no longer willing to negotiate over its nuclear capabilities.

In particular, under the leadership of Kim Jong Un, who came to power in 2011, North Korea has accelerated the development of its nuclear weapons. Three aspects of North Korea's nuclear capability have significantly increased since then. First, North Korea has miniaturized and standardized nuclear warheads, enabling them to be mounted on missiles. It is estimated to have developed at least two types of nuclear warheads—namely fission bombs and hydrogen bombs—through six nuclear tests, as shown in Table 2. During its first three nuclear tests, North Korea prioritized the development of smaller and lighter fissile nuclear warheads. That objective was achieved through its fifth nuclear test. In addition, North Korea states that its fourth (2016) and sixth (2017) nuclear tests were successful in terms of developing hydrogen bombs. The yield of its sixth nuclear test was estimated to be more than 140 kilotons (kt), which is significantly outside the range of typical fission bombs, leading experts to believe that it was likely a hydrogen bomb test.

This resulted in nuclear talks between Washington and Pyongyang and, eventually, the 1994 Agreed Framework, in which the United States agreed to provide North Korea with energy assistance and security guarantees. North Korea again resorted to this kind of deliberate crisis escalation in 1998 when it created the so-called missile crisis, which resulted in the visits of Vice Marshal Jo Myong-rok to the White House and Secretary of State Madeleine Albright to Pyongyang. During the Six-Party Talks, which began in 2003 following North Korea's alleged uranium enrichment and withdrawal from the Treaty on the Non-Proliferation of Nuclear Weapons, Pyongyang also used its nuclear cards to break the impasse in the negotiations with the United States. For example, North Korea conducted its first nuclear test in 2006. According to Chun Young-woo, then-head of the South Korean delegation to the Six-Party Talks and later national security advisor to President Lee Myung-bak, Pyongyang conducted the test to facilitate the retrieval of its funds held in the Banco Delta Asia, which had been frozen by the U.S. Treasury in 2005.

Table 2. North Korea's History of Nuclear Tests

	First	Second	Third	Fourth	Fifth	Sixth
Date	Oct 2006	May 2009	Feb 2013	Jan 2016	Sep 2016	Sep 2017
Seismic Magnitude*	4.1 mb	4.25 mb	4.9 mb	4.85 mb	5.1 mb	6.1 mb
Estimated Yield**	0.5–2 kt	2–4 kt	6–9 kt	7–10 kt	10 kt	140+ kt
North Korea's Announcement	Successful nuclear test	Yield improved	Successfully miniaturized	First hydrogen bomb test	Successfully standardized	Hydrogen bomb for ICBMs

* Seismic magnitude refers to the body wave magnitude (mb), which measures the size of a seismic event such as an earthquake. It is one factor used to estimate the yield of a nuclear weapon following an underground detonation.

** Yield represents the amount of energy released when a nuclear device is detonated. It is typically measured in kilotons (kt). One kiloton is equal to the explosive force of 1,000 tons of TNT.

Source: "Missiles of North Korea," CSIS Missile Defense Project, last updated November 22, 2022. <https://missilethreat.csis.org/country/dprk/>. Accessed March 15, 2023.

Second, North Korea has developed both ICBMs capable of reaching the U.S. mainland. North Korea tested the Hwasong-14 ICBM on July 4 and July 28, 2017, followed by the Hwasong-15 on November 29, 2017. In the case of the Hwasong-15, the missile reached a peak altitude of 4,475 kilometers and flew 950 kilometers for 53 minutes. David Wright from the Massachusetts Institute of Technology estimates that if North Korea launched a missile at a standard angle, it would have a range of around 13,000 kilometers, enough to strike most of the U.S. mainland, including San Francisco, New York, and Washington.⁸⁴ In November 2022, North Korea launched Hwasong-17, its biggest missile yet. During the test, the missile reached a peak

⁸⁴ David Wright, "North Korea's Longest Missile Test Yet," All Things Nuclear (November 28, 2017). <https://allthingsnuclear.org/dwright/nk-longest-missile-test-yet/>. Accessed March 14, 2023.

altitude of 6,041 kilometers and flew nearly 1,000 kilometers for about 69 minutes, thereby demonstrating the advancement of North Korea’s ICBM technology over several years.⁸⁵

Third, North Korea has substantially improved its tactical nuclear capabilities. North Korea’s tests of the KN-23, KN-24, and KN-25 short-range ballistic missiles (SRBMs) are particularly noteworthy. Furthermore, North Korea has introduced diverse tactical launching platforms that can release short-range missiles from vehicles, trains, submarines, and most recently, even underwater silos. North Korea has also revealed remarkable improvements in the use of solid propellant for SRBMs and an application of a “pull up” maneuver in the final terminal phase of flight to avoid interception. In this regard, at the Eighth Party Congress of the Korea Workers’ Party on January 12, 2021, Kim Jong Un said that North Korea has successfully developed tactical nuclear weapons by mastering their miniaturization and standardization. According to South Korean military experts, at least 12 of these missiles have already been manufactured and deployed.⁸⁶ Table 3 shows a list of North Korean missiles, both operational and in development.

Table 3. North Korea’s Missile Launches

Missile Name	Class	Range	Status
BM-25 Musudan	IRBM	2,500–4,000 kilometers (km)	In Development
Hwasong-12	IRBM	4,500 km	In Development
Hwasong-13	ICBM	5,500–11,500 km	Never Deployed
Hwasong-14	ICBM	10,400 km	Operational
Hwasong-15	ICBM	8,500–13,000 km	In Development
Hwasong-17	ICBM	15,000 km	In Development
Hwasong-5	SRBM	300 km	Operational
Hwasong-6	SRBM	500 km	Operational
Hwasong 7 (Nodong 1)	MRBM	1,200–1,500 km	Operational
Hwasong-9	MRBM	800–1,000 km	Operational
KN-01	ASCM	110–160 km	Operational
KN-02	SRBM	120–170 km	Operational

⁸⁵ Josh Smith, “Factbox: North Korea’s new Hwasong-17 ‘monster missile’,” Reuters (November 18, 2022), <https://www.reuters.com/world/asia-pacific/north-koreas-new-hwasong-17-monster-missile-2022-11-19/>. Accessed March 14, 2023.

⁸⁶ Hyeongpil Ham, “North Korea’s Evolving Nuclear Posture: Strategic Implications of Pyongyang’s Tactical Nuclear Weapons Development,” *JDPS* 37, no. 3 (2021), p24; Sanggyu Lee, “Possibility of North Korea’s Development of Tactical Nuclear Weapons and its Implications in Nuclear Strategy and Control [북한의 전술핵 개발 가능성과 핵전략 및 핵 지휘통제 측면에서의 함의],” *Military and Technology [국방과 기술]* 506 (2021), pp66-73.

KN-06	SAM	150 km	Operational
KN-09 (KN-SS-9)	MLRS (300 mm)	200 km	In Development
KN-18 (Scud MaRV)	SRBM	450+ km	In Development
KN-23	SRBM	450 km	Unknown
KN-24	SRBM	410 km	In Development
KN-25	SRBM	380 km	Operational
Kumsong-3 (KN-19)	ASCM	130–250 km	Likely Operational
Pukguksong-1 (KN-11)	SLBM	1,200 km	In Development
Pukguksong-2 (KN-15)	MRBM	1,200–2,000 km	Operational
Pukguksong-3 (KN-26)	SLBM	1,900 km	Operational

Note: ICBM = inter-continental ballistic missile with a minimum range of 5,000 kilometers; IRBM = intermediate-range ballistic missile with a range of between 3,000 and 5,000 kilometers; MRBM = medium-range ballistic missile with a range of between 1,000 and 3,000 kilometers; SRBM = short-range ballistic missile with a range of 1,000 kilometers or less; ASCM = anti-ship cruise missile; SLBM = submarine-launched ballistic missile; MLRS = multiple launch rocket system; SAM = surface-to-air missile; MaRV = maneuverable reentry vehicle.

Source: “Missiles of North Korea,” CSIS Missile Defense Project. [Since you referenced this in an earlier table no need to add URL etc.]

According to leading South Korean national security expert Ham Hyeong-pil, North Korea will continue research and development for the purpose of upgrading and diversifying its nuclear capabilities in accordance with the directives issued by Kim Jong Un during the 8th Party Congress, which was held in January 2021.⁸⁷ North Korea has demonstrated the intention to develop a multiple independently targetable reentry vehicle (MIRV) in order to weaken the U.S. missile defense system. In addition to the SRBM and cruise missiles that are currently being developed, North Korea may wish to develop various tactical nuclear weapons, including nuclear shells, bombs, and torpedoes. Finally, North Korea may also seek to acquire reconnaissance, surveillance, and remote-sensing satellites for nuclear command, control, and early warning purposes. Uncertainty remains regarding whether North Korea could achieve these goals while subject to international sanctions and economic struggles, but if it is able to continue its nuclear development at the current rate, Ham anticipates that North Korea would soon be able to develop a full-range nuclear capability.

⁸⁷ Ham, “North Korea’s Evolving Nuclear Posture,” p17.

Diverging Threat Perceptions

As China has risen to become a peer-competitor and North Korea has increased its nuclear capability nearly simultaneously, the United States and South Korea have begun to perceive the threats posed by the two states differently. The United States views China as a greater threat. As a result, it treats North Korea as a secondary threat and a subset of its China policy. Specifically, Washington's concern about China stems from two assumptions: 1) the power gap between the United States and China is narrowing rather than widening; and 2) China is likely to use its power to displace U.S. leadership rather than comply with the existing international order. By contrast, South Korea views North Korea as the most substantial threat to its national security, whereas it views China as both a potential threat and a neighboring state with which it needs to manage its relationship. South Korea's sense of urgency concerning the North's nuclear threat has particularly increased as its recent doctrine involves the possibility of preemptive use of its nuclear weapons against South Korea.

U.S. Priority: The Strategic Competition with China

Within the U.S. policy community, the significance of the strategic competition with China in terms of U.S. national interests has been widely underscored, meaning that the competition is regarded as the nation's highest policy priority. The leading alarmist when it comes this issue is arguably Graham Allison.⁸⁸ Citing former Prime Minister of Singapore Lee Kuan Yew's view on the matter,⁸⁹ Allison warns that China's ultimate goal is to "displace the U.S. as the world's top economy and most powerful actor in the Western Pacific."⁹⁰ In his recent work, Allison further warns that "the time has come for us to retire the concept of China as a 'near peer competitor'

⁸⁸ Also see Rush Doshi, *The Long Game: China's Grand Strategy to Displace American Order* (Oxford: Oxford University Press, 2021); Graham Allison, "The U.S.-China Strategic Competition: Clues from History," Aspen Institute (February 2020), <https://www.belfercenter.org/publication/us-china-strategic-competition-clues-history#footnote-022-backlink> (accessed March 14, 2023).

⁸⁹ For example, when asked whether China's leaders are serious about displacing the United States as the top power in Asia in the foreseeable future, Lee Kuan Yew gave a direct answer: "Of course. Why not ... how could they not aspire to be number one in Asia and in time the world?" Moreover, when asked about China accepting its place in an international order designed and led by America, he stressed the unacceptability of such a situation: "China wants to be China and accepted as such—not as an honorary member of the West." See Graham Allison and Robert Blackwill, "Interview: Lee Kuan Yew on the Future of U.S.-China Relations," *The Atlantic* (March 5, 2013). <https://www.theatlantic.com/china/archive/2013/03/interview-lee-kuan-yew-on-the-future-of-us-china-relations/273657/>. Accessed March 14, 2023.

⁹⁰ Graham Allison, "What Xi Jinping Wants," *The Atlantic* (May 31, 2017). <https://www.theatlantic.com/international/archive/2017/05/what-china-wants/528561/>. Accessed March 14, 2023.

... We must recognize that China is now a ‘full-spectrum peer competitor.’”⁹¹ Then, he concludes that, in light of Beijing’s revisionist intent and comparable material power, the hegemonic competition could lead the two states into a so-called Thucydides trap, which describes the tendency toward war when an emerging power threatens to displace an existing great power as a hegemon.⁹²

Allison’s conclusion regarding the likelihood of hegemonic war between the United States and China seems overly pessimistic. In fact, as Allison himself admits, the likelihood of war is not actually very high. Both states possess second-strike nuclear forces and, therefore, the fear of mutually assured destruction constrains them from launching an all-out war. They are also economically dependent on one another, which gives rise to the possibility of mutually assured economic destruction in the event of a full-scale conflict.

Nevertheless, Washington strategists have long viewed its competition with China as its top and most pressing policy priority, as China is likely to seek to create its own international order based on its growing economic and military power in the near future.⁹³ In particular, as Alexander Cooley and Daniel Nexon note, China’s current approach to transforming the international order does not involve displacing existing institutions or norms, as it also depends on an open trading system and other norms associated with the liberal international order.⁹⁴ Instead, Beijing seeks to amplify its influence within established international institutions while forming alternative regional and international bodies that can serve as instruments for promoting its national interests and vision for a global order. These new international bodies include the Shanghai Cooperation Organization, the Asian Infrastructure Investment Bank, and

⁹¹ Graham Allison, “The Great Rivalry: China vs. the US in the 21st Century,” Belfer Center for Science and International Affairs, Harvard Kennedy School (December 7, 2021).

<https://www.belfercenter.org/publication/great-rivalry-china-vs-us-21st-century>. Accessed March 14, 2023.

⁹² Graham Allison, *Destined for War: Can America and China Escape Thucydides’s Trap?* (Wilmington: Houghton Mifflin, 2017); for shorter version, see Graham Allison, “Destined for War?” *The National Interest*, no. 149 (2017), p9–21.

⁹³ For instance, Allison states that “The preeminent geostrategic challenge of this era is ... the impact that China’s ascendance will have on the U.S.-led international order, which has provided unprecedented great-power peace and prosperity for the past 70 years.” James Dobbins and his RAND colleagues also posit that “China is a peer competitor that wants to shape an international order that it can aspire to dominate.” See Graham Allison, “The Thucydides Trap: Are the U.S. and China Headed for War?” *The Atlantic* (September 24, 2015).

<https://www.theatlantic.com/international/archive/2015/09/united-states-china-war-thucydides-trap/406756/> (accessed March 14, 2023); James Dobbins, Howard J. Shatz, and Ali Wyne, “Russia Is a Rogue, Not a Peer; China Is a Peer, Not a Rogue,” Perspectives, RAND Corporation (2019). <https://www.rand.org/pubs/perspectives/PE310.html>.

⁹⁴ Alexander Cooley and Daniel Nexon, *Exit from Hegemony: The Unraveling of the American Global Order* (Oxford: Oxford University Press, 2020); also see Michael J. Mazarr, Timothy R. Heath, and Astrid Stuth Cevallos, *China and the International Order* (Santa Monica: RAND Corporation, 2018).

New Development Bank. Perhaps especially important in this regard is the Belt and Road Initiative (BRI),⁹⁵ China's vision of a \$1 trillion investment in neighboring and developing states that mostly focuses on infrastructure issues—for the promotion of “the connectivity of Asian, European and African continent and their adjacent seas.”⁹⁶ China's new vehicles serve as alternative providers of similar goods and substitute for the functions provided by U.S.-dominated international institutions. As these new arrangements are less demanding than existing Western institutions such as the International Monetary Fund and the World Bank, the arrival of alternative options is not only attractive to vulnerable states, but also to key U.S. allies and partners, who are increasingly participating in China-led international initiatives. Accordingly, as Cooley and Nexon conclude, “China's championing of these new vehicles and institutions may transform the ecology of international order itself, steadily increasing the power and activity of non-U.S. sources of order.”⁹⁷

The U.S. government's strategic documents reflect this sense of urgency. Previously, the United States tended to exhibit hope that China would become a “responsible stakeholder” that largely accepted the ordering principles established by the United States. As a consequence, the U.S. supported China's World Trade Organization membership in 2000 and maintained a relationship with China through diplomacy within existing international institutions. However, as China has increasingly been creating parallel institutions that may substitute the existing U.S.-led institutions, the United States has drastically changed its policy toward China and begun to view it as a strategic rival. The 2017 National Security Strategy states that “For decades, U.S. policy was rooted in the belief that support for China's rise and for its integration into the post-war international order would liberalize China.”⁹⁸ Yet, “Contrary to our hopes, China expanded its power at the expense of the sovereignty of others.”⁹⁹ Similarly, the 2018

⁹⁵ Cooley and Nexon note about the significance of BRI in China's grand strategy that “China seeks to more actively shape, on a bilateral basis, the political attitudes of its neighbors with the aim of making them friendlier and more responsive to Chinese foreign policy and strategic priorities ... The BRI also targets new markets for Chinese industries already operating at overcapacity, especially steel and cement manufacturing. Chinese financing arms, such as the China Development Bank or the Export-Import Bank, can set terms that award project contracts to specific Chinese companies and mandate the use of Chinese labor. Finally, the BRI umbrella also offers opportunities to regional and local governments to expand their regional and foreign activities as they vie to become transit hubs.” See Cooley and Nexon, p100.

⁹⁶ “Vision and Actions on Jointly Building Belt and Road,” the National Development and Reform Commission, Ministry of Foreign Affairs, and Ministry of Commerce of the People's Republic of China (March 28, 2015). <http://2017.beltandroadforum.org/english/n100/2017/0410/c22-45.html>. Accessed March 14, 2023.

⁹⁷ Cooley and Nexon, p.10.

⁹⁸ “National Security Strategy of the United States of America,” The White House (December 2017), p25. <https://history.defense.gov/Portals/70/Documents/nss/NSS2017.pdf?ver=CnFwURrw09pJ0q5EogFpwg%3d%3d>. Accessed March 14, 2023.

⁹⁹ “National Security Strategy of the United States of America,” p25.

National Defense Strategy classifies China as a “revisionist power” that “wants to shape the world consistent with their authoritarian model” and identifies “the reemergence of long-term strategic competition” with China and Russia as “the central challenge to U.S. prosperity and security.”¹⁰⁰

Notably, this shift toward a tougher stance with regards to China reflects a consensus among both conservatives and liberals in Washington. For instance, the Biden administration’s 2021 Interim National Security Strategic Guidance also emphasizes that “China, in particular, has rapidly become more assertive” and that the U.S. policy agenda aims to “prevail in strategic competition with China.”¹⁰¹ Furthermore, the administration’s National Security Strategy, which was released in October 2022, emphasizes that China is “the only competitor with both the intent to reshape the international order and, increasingly, the economic, diplomatic, military, and technological power to do it.”¹⁰² Following that, the U.S. embassy in Beijing issued a press briefing, saying, “We will leverage all elements of our national power” to “compete with the People’s Republic of China.”¹⁰³ This trend appears likely to persist. Research by Chatham House suggests that “The U.S.’s relationship with China will continue to dominate foreign policy, and there is broad agreement that the U.S. should take a tougher line.”¹⁰⁴

South Korea’s Priority: Coping with North Korea’s Imminent Threat

Similar to the United States, China is currently interfering in South Korea’s pursuit of national security interests. Such view is not solely attributable to China’s economic sanctions against South Korea, which were imposed in 2016 and 2017 in response to the U.S.-South Korea joint decision to deploy the U.S. Terminal High Altitude Area Defense (THAAD) system on the Korean

¹⁰⁰ “Summary of the 2018 National Defense Strategy of the United States of America,” U.S. Department of Defense(2018). <https://dod.defense.gov/Portals/1/Documents/pubs/2018-National-Defense-Strategy-Summary.pdf>. Accessed March 14, 2023.

¹⁰¹ “Interim National Security Strategic Guidance,” The White House (March 2021). <https://www.whitehouse.gov/wp-content/uploads/2021/03/NSC-1v2.pdf>. Accessed March 14, 2023.

¹⁰² “National Security Strategy,” The White House (October 2010), p23. <https://www.whitehouse.gov/wp-content/uploads/2022/10/Biden-Harris-Administrations-National-Security-Strategy-10.2022.pdf>. Accessed March 14, 2023.

¹⁰³ “Fact Sheet: The Biden-Harris Administration’s National Security Strategy,” U.S. Embassy and Consulates in China (October 17, 2022). <https://china.usembassy-china.org.cn/fact-sheet-the-biden-harris-administrations-national-security-strategy/>. Accessed March 14, 2023.

¹⁰⁴ Leslie Vinjamuri et al., “US Foreign Policy Priorities,” Chatham House (October 15, 2020). <https://www.chathamhouse.org/2020/10/us-foreign-policy-priorities/01-introduction-america-constrained>. Accessed March 14, 2023.

Peninsula.¹⁰⁵ In 2013, China unilaterally declared its area of operation to extend west of the 124° east line of longitude.¹⁰⁶ The 124° line is only around 50 kilometers from Baengnyeong, a South Korean island. Moreover, in 2019, Chinese bombers and Russian military aircraft flew between South Korean islands in the East Sea. During this incident, one of the Russian military aircraft entered South Korean territorial airspace without authorization.¹⁰⁷ In 2019, China launched space rockets from a barge located in the Yellow Sea near South Korea.¹⁰⁸ Military experts caution that this incident is indicative of China's capability to engage in surprise missile launches from the sea during a crisis.¹⁰⁹ Furthermore, despite North Korea being subject to international sanctions in which China participates, smuggling and cyber activities that could undermine the effectiveness of such sanctions have been conducted through or near China.¹¹⁰

Contrary to the United States, however, South Korea has endeavored to prevent or manage situations in which China might become a military adversary.¹¹¹ Instead, as President Yoon emphasizes in an interview with CNN, "North Korea remains an imminent threat" to South Korean security due to its growing nuclear capabilities.¹¹²

¹⁰⁵ Darren J. Lim and Victor Ferguson, "Chinese Economic Coercion during the THAAD Dispute," The Asan Forum (December 28, 2019). <https://theasanforum.org/chinese-economic-coercion-during-the-thaad-dispute/>. Accessed March 14, 2023.

¹⁰⁶ Jeong Yong-Su, "China Tried Muscling South Korea in Yellow Sea," *JoongAng Daily* (November 29, 2013). <https://koreajoongangdaily.joins.com/2013/11/29/politics/China-tried-muscling-South-Korea-in-Yellow-Sea/2981288.html>. Accessed March 14, 2023.

¹⁰⁷ Choe Sang-Hun, "South Korean Jets Fire Warning Shots Toward Russian Military Plane," *The New York Times* (July 23, 2019). <https://www.nytimes.com/2019/07/23/world/asia/south-korean-warning-shots-russia-planes.html>. Accessed March 14, 2023.

¹⁰⁸ "China Launches Rocket from Ship at Sea for First Time," Reuters (June 4, 2019). <https://www.reuters.com/article/us-china-space/china-launches-rocket-from-ship-at-sea-for-first-time-idUSKCN1T60GW>. Accessed March 14, 2023.

¹⁰⁹ "China Launches Satellites from Barge in Yellow Sea," *Asia Times* (June 6, 2019). <https://asiatimes.com/2019/06/china-launches-satellites-from-barge-in-yellow-sea/>.

¹¹⁰ "Missile Funding?: North Korea Seen Smuggling Coal to China," *Nikkei Asia* (June 29, 2022). <https://asia.nikkei.com/Spotlight/N-Korea-at-crossroads/Missile-funding-North-Korea-seen-smuggling-coal-to-China> (accessed March 14, 2023); Christoph Koettl, "How Illicit Oil Is Smuggled Into North Korea With China's Help," *The New York Times* (March 24, 2021), <https://www.nytimes.com/2021/03/24/world/asia/tankers-north-korea-china.html> (accessed March 14, 2023); "Senior U.S. Official Accuses China of Aiding North Korea Cyber Thefts," Reuters (October 22, 2020), <https://www.reuters.com/article/us-usa-northkorea-china/senior-u-s-official-accuses-china-of-aiding-north-korea-cyber-thefts-idUSKBN2772RX> (accessed March 14, 2023).

¹¹¹ David C. Kang, "Between Balancing and Bandwagoning: South Korea's Response to China," *Journal of East Asian Studies* 9, no. 1 (2009), p1-28; Yaechan Lee, "Riding the Tide: Assessing South Korea's Hedging Strategy through Regional Security Initiatives," *The Pacific Review* (2021), p1-27.

¹¹² President Yoon's interview with CNN, see "South Korean President: North Korea Remains an Imminent Threat," CNN (September 25, 2022), <https://edition.cnn.com/videos/tv/2022/09/25/exp-gps-0925-south-korean-president-yoon-north-korea-threat.cnn> (accessed March 14, 2023).

In particular, South Korean strategists are concerned that North Korea's nuclear doctrine has evolved beyond deterrence to a "war-fighting" strategy.¹¹³ The North Korean Nuclear Forces Law, which was enacted on September 8, 2022, clarifies its new nuclear doctrine. According to Article 1 of the law, North Korea's nuclear force is based on "deterrence of war," but it will carry out its "operational mission" for a decisive victory if deterrence were to fail. Furthermore, Article 6 of the law allows it to use nuclear weapons preemptively against non-nuclear attacks. In this regard, experts warn that North Korea's new nuclear posture is "the most aggressive and radical" among nuclear powers.¹¹⁴

North Korean preemptive nuclear attacks could target South Korea's political centers. This threat is clearly different from North Korea's long-range artillery because a single nuclear attack could cause panic in South Korea. Furthermore, its surprise nuclear attacks against South Korean airbases and naval ports would effectively hamstring its warfighting capability. North Korea's nuclear capabilities could, in the long run, shift the balance of power on the Korean Peninsula in favor of North Korea. In this case, South Korea may no longer benefit from superior military power and would have to compete on an equal basis with North Korea.

However, it seems that South Korean strategists' concerns about the nuclear threat posed by North Korea are overstated. North Korea is unlikely to use its nuclear weapons except in a situation where the collapse of the Kim regime is an imminent risk. Moreover, there is little incentive for North Korea to display the same level of resolve and recklessness as it did prior to possessing nuclear weapons. Consequently, conventional military provocations by a nuclear-armed North Korea will certainly continue to decline. Nonetheless, South Korean strategists posit that North Korea could inadvertently use nuclear weapons if it misperceives the intentions of Washington and Seoul (especially due to the alliance's preemptive strike plans), miscalculates Washington's willingness to intervene, or concludes that it has no choice but to use nuclear weapons in desperate circumstances with a "now-or-never" mindset.¹¹⁵

¹¹³ Hong Min and Jea Hwan Hong, "An Analysis of Kim Jong Un's Speech to the 7th Session of the 14th DPRK SPA," Online Series, Korea Institute for National Unification (September 15, 2022). <https://www.kinu.or.kr/pyxis-api/1/digital-files/cb285ef6-3b6a-479f-a522-8ab4105e4c2d>. Accessed March 14, 2023.

¹¹⁴ Jung-sup Kim and Chung-in Moon, "North Korea's Nuclear Capabilities, Intentions and Prospects," *Global Asia* (March 2023).

¹¹⁵ In particular, if Pyongyang's miscalculation regarding Washington's resolve is combined with North Korea's unbalanced force structure, Pyongyang's incentive to engage in preemptive nuclear use may be increased even further. While North Korea possesses hundreds of nuclear-capable missiles and long-range rockets, its defenses are aging and unreliable. Moreover, although North Korea relies on underground facilities to defend itself, the modern weapons system possessed by the U.S.-ROK alliance can effectively neutralize such facilities. This imbalance in terms of both offense and defense puts pressure on Pyongyang to use nuclear weapons first if a crisis

This possibility is the reason that South Koreans view North Korea's nuclear capacity as a greater threat than that posed by China—and that the North Korean threat should be addressed first. Consequently, almost all discussions on national security are centered on this threat, although there is a rising discussion within the South Korean policy community regarding how much it should worry about China's rise and future deterrence of both Chinese coercion—as well as Beijing's potential support for North Korea's aggression.¹¹⁶ Similarly, South Korea's Defense White Papers have seen China as a neighboring state to cooperate with rather than a military adversary and instead exclusively focus on defending the country from North Korea's aggression.

Disparity in Policy Priorities

A disparity in the threat perception leads to a disparity in policy priorities when two prominent threats emerge simultaneously. Each country may focus on the threat it perceives to pose the greatest threat to its strategic interests while avoiding involvement in the lesser threat. The pursuit of national security may then cause their ally to fear abandonment, weakening the alliance's cohesion by making member states doubt each other's commitment. This dynamic is currently occurring within the U.S.-ROK alliance. When both China and North Korea emerge as prominent threats at the same time, these two allies have avoided engaging in secondary threats. As a result, the United States and South Korea have been discontented with each other's commitment.

South Korean Perspective: United States Reluctance to be Deeply Involved in North Korean Issues

As South Korea's perception of Pyongyang's threats intensified, Seoul demanded that Washington demonstrate a stronger commitment to its extended deterrence. As a consequence, for the first time in the history of the U.S.-ROK alliance, the joint statement issued during the U.S.-ROK summit held in June 2009 made specific reference to the U.S. extended deterrence: "We will maintain a robust defense posture, backed by allied capabilities

inadvertently escalates. Indeed, North Korea's weak defense capabilities prevent it from waiting for an opponent to attack first; consequently, its optimal strategy is achieving a strategic advantage through preemptive attacks.

¹¹⁶ For instance, according to the Korea Citation Index, only five papers on the Chinese threat to South Korean security have appeared in major South Korean policy journals over the past five years.

which support both nations' security interests. The continuing commitment of extended deterrence, including the U.S. nuclear umbrella, reinforces this assurance."¹¹⁷

Moreover, during the 41st Security Consultative Meeting (SCM) held between defense leaders from the United States and South Korea in 2009, U.S. Defense Secretary Robert Gates confirmed that U.S. extended deterrence includes not only the U.S. nuclear umbrella, but also all U.S. military forces and assets stationed on the Korean Peninsula. In fact, he pledged to "provide extended deterrence for the ROK, using the full range of military capabilities."¹¹⁸ Here, the phrase "full range of military capabilities" implies that U.S. extended deterrence includes both conventional and nuclear capabilities.¹¹⁹ Most importantly, the two states agreed to jointly develop a "tailored deterrence strategy" to counter North Korea's growing nuclear weapons threats, which was subsequently approved by their defense leaders in 2013.¹²⁰

Nevertheless, South Koreans' doubt regarding the credibility of U.S. commitment has grown rather than diminished. There are two core reasons for these concerns on the part of South Koreans. First, South Korean experts are concerned that Washington's desire to enhance the strategic flexibility of U.S. forces in Korea (USFK) could weaken U.S. deterrence with regard to North Korea and increase the risk of South Korea becoming entangled in the U.S.-China competition if Washington uses the USFK to address issues related to China.¹²¹ China's rise as a

¹¹⁷ Office of the Press Secretary, "Joint Vision for the Alliance of The US of America and The Republic of Korea," The White House (June 16, 2009). <https://obamawhitehouse.archives.gov/the-press-office/joint-vision-alliance-united-states-america-and-republic-korea>. Accessed March 14, 2023.

¹¹⁸ "Joint Communique: The 41st ROK-U.S. Security Consultative Meeting," 2010 Defense White Paper, Ministry of National Defense, Republic of Korea (December 31, 2010). https://www.files.ethz.ch/isn/155720/South%20Korea%202010_eng-1.pdf. Accessed March 14, 2023.

¹¹⁹ These conventional and nuclear capabilities include (1) U.S. forces in Korea, (2) Indo-Pacific Command assets, (3) U.S. military reinforcements from the mainland in the event of war on the Korean Peninsula, and (4) U.S. nuclear forces.

¹²⁰ Tailored deterrence strategy involves the provision of regional allies with the tailored means and ways of deterrence to counter specific threats, taking into account the unique security situation and challenges of each region. The U.S.-ROK alliance's tailored deterrence strategy covers diverse contingency scenarios, from North Korea's threat to use nuclear weapons to an actual nuclear attack. Specifically, this joint, tailored deterrence strategy involves a three-step response. First, if North Korea threatens to use nuclear weapons, the United States will deploy strategic bombers, SSBNs, precision strike assets, and missile defense forces on the Korean Peninsula and surrounding areas. Second, if a nuclear attack by North Korea is imminent, South Korea and the United States will strike North Korea's nuclear launchers with precision-guided weapons. Furthermore, the United States will increase the readiness of its nuclear forces. Third, if North Korea employs nuclear weapons against South Korea, the United States will implement decisive countermeasures, including the use of nuclear weapons, in consultation with the South Korean leadership.

¹²¹ Yoo In-Seok, "Rethinking 'Strategic Flexibility' of USFK: From a Perspective of Deterrence and Stabilizer Role [주한미군의 전략적 유연성에 대한 고찰]," *National Strategy* 27, no. 3 (2021), p53-79; Kang Seok-ryul, "US Dynamic Force Employment and Implications to South Korea [미 군사력의 역동적 운용과 우리의 대응방향],"

major competitor to the United States has increased the need to enhance the strategic flexibility of U.S. forces stationed throughout the Asia-Pacific region in order to deal with the uncertain security conditions. In particular, the Trump and Biden administrations have bolstered measures intended to increase that strategic flexibility. For example, the Trump administration's National Defense Strategy emphasized the need for "dynamic force employment," which requires "increased strategic flexibility and freedom of action."¹²² The publication of this strategy was followed by the redeployment of B-52 bombers from Guam to the U.S. mainland in 2020.¹²³

In the case of the Biden administration, Undersecretary of Defense for Policy Colin Kahl mentioned in his response to questions from the Senate that the USFK are not bound by a "magic number" and that they should maintain their flexibility to effectively respond to new regional threats.¹²⁴ Similarly, during the Senate hearing, the commander of the USFK, General Paul LaCamera, emphasized the strategic flexibility of the USFK.¹²⁵ In response to LaCamera's statement, South Korean Defense Minister Suh Wook expressed concern and stated that "The U.S. force command in Korea is not a tool for U.S.-China competition."¹²⁶ As tensions regarding Taiwan have increased in recent years, U.S. experts now suggest that U.S. troops stationed in Korea would participate in any conflict between China and Taiwan.¹²⁷ Both Washington and Seoul maintain that the top priority of the USFK is responding to North Korea's threats and that U.S. commitment to South Korea is "ironclad," although South Korean concerns persist.¹²⁸

KIDA Defense Issues and Analysis, no. 1831 (December 21, 2020).

<https://www.kida.re.kr/images/skin/doc.html?fn=e41cdae61b9b7b79521add2d4476ed93&rs=/images/convert>.

¹²² "Summary of the 2018 National Defense Strategy of the United States of America," Department of Defense (2018), p7. <https://dod.defense.gov/Portals/1/Documents/pubs/2018-National-Defense-Strategy-Summary.pdf>. Accessed March 14, 2023.

¹²³ Brad Lendon, "US Air Force Pulls Bombers from Guam," CNN (April 24, 2020).

<https://edition.cnn.com/2020/04/24/asia/guam-us-air-force-bombers-pull-out-intl-hnk/index.html>. Accessed March 14, 2023.

¹²⁴ "Advance Policy Questions for Dr. Colin Kahl," U.S. Senate Armed Service Committee (March 4, 2021).

https://www.armed-services.senate.gov/imo/media/doc/Kahl_APQs_03-04-21.pdf. Accessed March 15, 2023.

¹²⁵ "USFK Commander Nominee: S. Korea-US Alliance Can Cooperate Beyond Korean Peninsula," *Hankyoreh* (May 20, 2021). https://english.hani.co.kr/arti/english_edition/e_international/996001.html. Accessed March 15, 2023.

¹²⁶ "Suh Wook Said 'Making Progress in Operational Control Transfer...'," *Yonhap News* (January 28, 2021).

https://www.yna.co.kr/view/AKR20210128_036551504?input=1195m. Accessed March 15, 2023.

¹²⁷ Voice of America, "Interview with Former Secretary of Defense Mark Asper," YouTube video, 3:39 (July 11, 2022). https://www.youtube.com/watch?v=W9QFJ8RzY-&ab_channel=VOA%ED%95%9C%EA%B5%AD%EC%96%B4.

¹²⁸ "Defense Ministry Highlights USFK's 'Top Priority' on Addressing N. Korean Threats," *Yonhap News* (September 27, 2022). <https://en.yna.co.kr/view/AEN20220927004200325> (accessed March 15, 2023); "U.S. Commitment to South Korea is Ironclad," *VOA News* (October 7, 2022), <https://editorials.voa.gov/a/u-s-commitment-to-south-korea-is-ironclad/6780035.html> (accessed March 15, 2023).

South Korean experts are also concerned that U.S. domestic support for restraint policies could render Washington hesitant to intervene in the event of a crisis on the Korean Peninsula. For their part, U.S. strategists appear concerned that U.S. power is overstretched and that the pursuit of engagement policies could erode its global hegemony, particularly in light of China's growing challenges.¹²⁹ Thus, they aim to concentrate its national power on its core competition with China while saving power in other areas. This trend has become especially apparent during the Biden administration, as Hal Brands explains:

Biden's initial theory of foreign policy was straightforward: don't let smaller challenges distract from the big one. Of all the threats Washington faces, Biden's interim national security strategy argued, China "is the only competitor" able to "mount a sustained challenge to a stable and open international system." That challenge has become greater as China has accelerated its efforts to overturn the balance of power in Asia ... Biden was not naive enough to think that other problems would simply vanish. With trouble brewing on this central front, however, he did seek a measure of calm on others.¹³⁰

As Brands expounds, the United States previously sought to maintain its military capability to fight two serious wars in separate regions at the same time, assuming those wars would be against rogue states or terrorist groups.¹³¹ Today, the question is whether the United States is able to wage wars against two near-peer great powers—that is, China and Russia. Moreover, the emergence of North Korea along with China would further push the United States to

¹²⁹ In addition, U.S. public support for the preemptive use of military force has steadily declined in recent years. For example, in a 2017 survey by the Pew Research Center, 48% of respondents stated that the use of preemptive military force is rarely or never justifiable, a statistic that was up from 30% in 2003. In terms of U.S. involvement in international problems, 57% of respondents stated that the United States should deal with its own problems and let other states deal with theirs as best they can, a statistic that was up from around 30% in the early 2000s. This growing public support for restraint policies is likely partly attributable to the growing war fatigue caused by the protracted conflicts in Afghanistan and Iraq and the war against the Islamic State of Iraq and the Levant (ISIL). Others claim that the United States should reduce its military spending in order to better fund domestic infrastructure and social programs. See "Public Uncertain, Divided Over America's Place in the World," Pew Research Center (May 5, 2016), <https://www.pewresearch.org/politics/2016/05/05/public-uncertain-divided-over-americas-place-in-the-world/> (accessed March 15, 2023); Alec Tyson, "Americans Are Split on the Principle of Pre-emptive Military Force," Pew Research Center (November 28, 2017), <https://www.pewresearch.org/fact-tank/2017/11/28/americans-are-split-on-the-principle-of-pre-emptive-military-force/> (accessed March 15, 2023); "Section 1: America's Global Role," Pew Research Center (December 3, 2013), <https://www.pewresearch.org/politics/2013/12/03/section-1-americas-global-role/> (accessed March 15, 2023).

¹³⁰ Hal Brands, "The Overstretched Superpower," *Foreign Affairs* (January 18, 2022).

<https://www.foreignaffairs.com/articles/china/2022-01-18/overstretched-superpower>. Accessed March 15, 2023.

¹³¹ Hal Brands, "The Overstretched Superpower."

prioritize the threats it is facing and concentrate its power on addressing the most significant one.

South Korean experts consider that U.S. public and expert support for restraint policies and the retention of strategic flexibility have had a significant impact on the direction of U.S. foreign policy in recent years.¹³² Against this background, there is deepening pessimism among South Korean experts concerning the reliability of U.S. commitments. In particular, a number of leading national security experts have warned that the United States may not actively commit to South Korean security in the event of a war with North Korea. For example, Kim Sung-han, the current head of the South Korean National Security Council, argued that “U.S. extended deterrence has not demonstrated high credibility in terms of capability and will.” Similarly, leading South Korean strategists such as Cho Dong-joon, Park Hwi-rak, Shin Beom-chul, Kim Jung-seop, and Hwang Il-do have all cautioned that the United States may be unable to provide defense to South Korea because North Korea’s growing nuclear capability would impose greater costs on the United States with regard to fighting against North Korea.¹³³

U.S. Perspective: South Korean Reluctance to Become Involved in the U.S.-China Competition

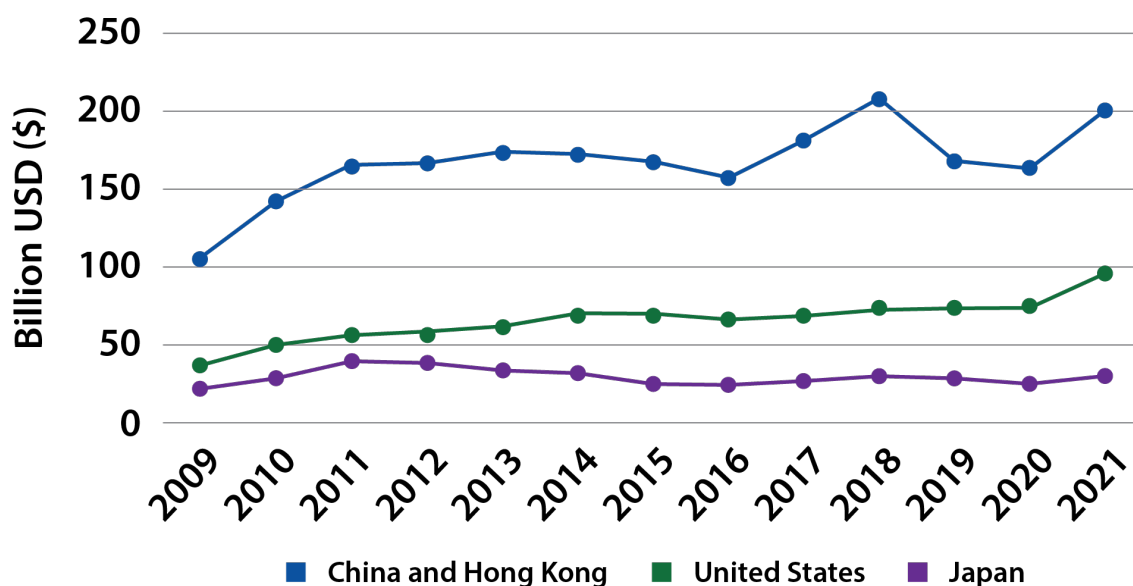
Washington appears to hope that South Korea will actively participate in the U.S.-China strategic competition as a U.S. ally. Relatedly, the United States has asked other allies and partners to join in its efforts to contain China. Here, Japan and Australia are the states in the Asia-Pacific region that cooperate most actively with the United States. Interestingly, these two states continue to maintain close commercial connections with China, although neither

¹³² Examples include the Obama administration’s military spending cut, the Trump administration’s application of pressure on U.S. allies to increase the sharing of the defense burden while reducing the number of U.S. troops abroad, and the Biden administration’s decision to withdraw U.S. troops from Afghanistan and Syria.

¹³³ Sung-han Kim, “Assessment of U.S. Extended Deterrence on the Korean Peninsula [미국의 한반도 확장억제 평가],” *JIP* 25, no. 2 (2020), p33. Also see Dong-joon Cho, “Implications of North Korea’s Nuclear Progress to the U.S. Extended Deterrence in the Korean Peninsula [북한의 핵능력 증가가 미국의 확장억제에 주는 함의와 대처방안],” *Korean National Strategy* 2, no. 1 (2017), pp253-308; Hwee-rhak Park, “An Examination of the Probability of the U.S. Nuclear Extended Deterrence under the Advanced North Korean Nuclear Threat [북핵 고도화 상황에서 미 확장억제의 이행 가능성 평가],” *JIP* 22, no. 2 (2017), pp85-114; Beomchul Shin, “A ROK-U.S. Alliance Strategy Tailored to North Korea’s Advanced Nuclear Capabilities [북핵 위협에 대응하기 위한 한미의 억제정책 방향],” *Korean Strategic Studies*, no. 15 (2021), p97-119; Jungsup Kim, “The Reconstitution of Extended Deterrence Policy for the Korean Peninsula: Limitations of Nuclear Umbrella and Search for Conventional Deterrence [한반도 확장억제의 재조명],” *National Strategy* 21, no. 2 (2015), pp5-40; Il-do Hwang, “Alliances and Nuclear Sharing: The NATO Case and the Implications of Reintroducing the TNW into the Korean Peninsula [동맹과 핵공유: NATO 사례와 한반도 전술핵 재배치에 대한 시사점],” *National Strategy* 23, no. 1 (2017), pp5-33.

wants China to displace the status-quo order led by the United States. As a consequence, they both play a central role in the U.S. Indo-Pacific strategy. For example, Japan and Australia are key participants in the Quadrilateral Security Dialogue (QUAD), which has included containing China among its aims since its revival in 2017. Thus, when the threat posed by China escalates, Japan and Australia respond in the same voice as the United States. For instance, when China increased its threat to Taiwan, former Australian Prime Minister Scott Morrison stressed the “need to guard against the use of Chinese force,”¹³⁴ while Japanese officials stated the desire to “protect Taiwan as a democratic country.”¹³⁵

Figure 2. South Korea’s Exports to China, Japan, and the United States (2009–2021)



Conversely, South Korea has been reluctant to join U.S.-led efforts to contain China, even though the United States has continuously demanded its commitment to the U.S. Indo-Pacific Strategy since 2017. One reason for this is that South Korea’s economy is heavily reliant on trade with China (see Figure 2 above). For example, South Korea’s economic dependence on

¹³⁴ Daniel Hurst and Helen Davidson, “Taiwan Thanks Australian PM and Defence Minister for Grim Warning Over China,” *The Guardian* (November 29, 2021). <https://www.theguardian.com/australia-news/2021/nov/30/taiwan-thanks-australian-pm-and-defence-minister-for-grim-warning-over-china>. Accessed March 15, 2023.

¹³⁵ Reuters, “Japan’s Deputy Defense Minister Says Taiwan Must Be Protected ‘as a Democratic Country,’” *CNN* (June 29, 2021). <https://www.cnn.com/2021/06/29/asia/japan-taiwan-defense-intl-hnk/index.html>. Accessed March 15, 2023.

trade (i.e., the volume of imports and exports over GDP) was 80% in 2021,¹³⁶ with China accounting for around a third of that trade.¹³⁷ Moreover, since 2017, while the United States has reduced its economic dependence on China, South Korea's economic dependence on China has increased. As Figure 2 shows, South Korea's exports to China and Hong Kong exceeded \$200 billion in both 2018 and 2021. Its exports to Japan and the United States increased in 2021 as a result of the economic surge that followed the COVID-19 pandemic in 2020, although South Korea's exports to China remain twice as high as those to the United States and 6.5 times higher than those to Japan. China is also a significant importer of parts and raw materials to South Korea. Indeed, in 2020, 29.3% of South Korea's imports of material parts originated in China. In addition, South Korea's crucially important industries, such as semiconductor and battery production, are particularly reliant on raw materials from China.¹³⁸

Beyond economic considerations, China also exerts a significant influence over South Korea's national security. There are currently arguably two major threats to the national security of South Korea: the military threat posed by North Korea and the threat to the Southern Sea Lanes of Communication (SLOC) through which around 90% of South Korea's crude oil is transported. To date, the southern SLOC has been protected without incident due to the existence of the U.S.-led order, but this situation could be jeopardized if South Korea positions China as a military competitor. In addition, South Korea should work collaboratively with China to manage the North Korean threat, given that North Korea relies almost entirely on trade with China and that Beijing may intervene at any time if a crisis escalates on the Korean Peninsula.

Consequently, South Korea has remained equivocal when the United States has demanded its participation in balancing strategies such as the QUAD. South Korea has been cautious due to the belief that if it were to become involved in the United States's strategic competition with China, it would suffer significant disadvantages. This belief appears well founded, as China confirmed its propensity for economic and military coercion in response to South Korea's participation in the U.S.-led anti-China coalition during the 2017 THAAD incident. In short, South Korea has good economic ties with China as well as a significant amount of interdependence. Thus, while it is not too worried about military provocations from China, South Korea is concerned about economic and technological blackmail and issues of that kind.

¹³⁶ "Trade (% of GDP) – Korea, Rep.," The World Bank.

<https://data.worldbank.org/indicator/NE.TRD.GNFS.ZS?locations=KR>. Accessed August 8, 2022.

¹³⁷ For example, in 2021, South Korea's overall exports amounted to around \$644 billion, while its exports to China were approximately \$200 billion.

¹³⁸ Erika Na, "South Korea's Supply Chain Reliance on China Leaves It More Exposed than the US, Japan: Report," *South China Morning Post* (January 13, 2022). <https://www.scmp.com/economy/china-economy/article/3163101/south-koreas-supply-chain-reliance-china-leaves-it-more>. Accessed March 15, 2023.

This is why South Korea does not want to become entangled in the U.S.-China strategic competition.

The Yoon government does not shift its policy direction concerning China due to the above-mentioned economic and security concerns, although the Yoon government has shown signs of active support for U.S.-led initiatives.¹³⁹ Yet, despite participating in such initiatives, South Korea has concurrently sought to mitigate China's concerns and manage Seoul-Beijing relations. For example, South Korean Foreign Minister Park Jin clarified to Chinese Foreign Minister Wang Yi that Seoul is not seeking to contain China.¹⁴⁰ Furthermore, the South Korean government has been adamant that its decision to join the IPEF is not intended to keep China in check.¹⁴¹ South Korea's participation in any coalition focused on security is highly unlikely. According to an interview I conducted with Yang Uk, a research fellow at the Asan Institute for Policy Studies, "if South Korea joins the QUAD, Seoul will likely face economic retaliation from China. However, the current Yoon government may be unable to politically withstand a frame in which its security policy results in serious economic damage from China."

As South Korea has adopted an ambiguous stance, Washington has begun to doubt Seoul's loyalty to the U.S.-ROK alliance and view the alliance as less important than its relationship with other allies and partners who are willing to actively participate in U.S.-led coalitions. For instance, as Heginbotham and Samuels note, "Most U.S. strategists see balancing against Chinese power as a principal goal of foreign policy ... Korea, however, whether ruled by conservatives or by progressives, has shown little interest in balancing China."¹⁴² Citing Nancy Pelosi's recent trip to Seoul, another U.S. expert admits to being "very concerned that [Pelosi] was not met by the South Korean leadership," adding that "if it was designed to appease China, ... it was insulting to the U.S. ... [and] sent a signal to the world that South Korea wasn't standing up for shared values..."¹⁴³

¹³⁹ "Yoon Says S. Korea's Participation in IPEF Is Only Natural," *Yonhap News* (May 23, 2022). <https://en.yna.co.kr/view/AEN20220523004200315>. Accessed March 15, 2023.

¹⁴⁰ "Statement of ROK Ministry of Foreign Affairs," Ministry of Foreign Affairs (May 16, 2022). https://www.mofa.go.kr/www/brd/m_4080/view.do?seq=372313&page=17. Accessed March 15, 2023.

¹⁴¹ Kwang-woo Gu, Nam-gyun Kim, and Kyung-eun Park, "Park Jin: Please Explain Carefully So That There Is No Misunderstanding in 'Joining IPEF,'" *Seoul Economic Daily* (July 21, 2022). <https://www.sedaily.com/NewsView/268LXDOY7U>. Accessed March 15, 2023.

¹⁴² Eric Heginbotham and Richard J. Samuels, "Vulnerable US Alliances in Northeast Asia: The Nuclear Implications," *The Washington Quarterly* 44, no. 1 (2021), p167.

¹⁴³ Voice of America, "Washington Talks," YouTube video, 25:00 (August 5, 2022). https://www.youtube.com/watch?v=6VTguWABs1E&ab_channel=VOA%ED%95%9C%EA%B5%AD%EC%96%B4. Accessed March 15, 2023.

South Korea's stance has led to the United States's discontent with its commitment to U.S. regional strategy. Indeed, U.S. security experts suggest that "U.S. security interests overlap more broadly with Japan's than with South Korea's."¹⁴⁴ This view is also apparent among South Korea's security community, as an increasing number of scholars are publishing articles forewarning the risk of U.S. abandonment in the event of a conflict with North Korea. In an interview with the author of this paper, one South Korean security official reports "the impression that the United States views the ROK-U.S. alliance as a second-tier alliance." Indeed, South Korea was mentioned once in the Biden-Harris National Security Strategy, which was unveiled in October 2022, whereas Australia and Japan were mentioned seven and five times, respectively.¹⁴⁵

Conclusion

This paper has examined how the simultaneous emergence of China and North Korea as significant threats has led to divergent threat perceptions between the United States and South Korea. When threat perceptions diverge, each nation's prioritization of the greater threat to its national interests and avoidance of excessively deep engagement in any lesser threat results in dissatisfaction with the commitment of the other nation to the alliance.

This diverging threat perception is one of the primary reasons for South Korea's recent call for the development of nuclear weapons. South Korea is concerned that the United States may be hesitant to intervene in the event of nuclear escalation on the Korean Peninsula, as doing so could jeopardize the U.S. position in the strategic competition with China. In fact, according to the results of a recent survey, nearly 60% of respondents thought that the United States would not intervene due to concerns about the associated burden or would decide to intervene contingent upon its own interests.¹⁴⁶

The diverging threat perception is also an issue for the United States. Rather than actively cooperating with the United States to counter China's challenge to the U.S.-led order, South Korea has adopted a hedging strategy in an effort to maintain its relationship with China. The findings of a recent survey also indicate that the majority of South Koreans believe that South Korea should maintain neutrality in the strategic competition between the United

¹⁴⁴ Heginbotham and Samuels, "Vulnerable US Alliances in Northeast Asia," p166.

¹⁴⁵ "National Security Strategy," The White House (October 2010). <https://www.whitehouse.gov/wp-content/uploads/2022/10/Biden-Harris-Administrations-National-Security-Strategy-10.2022.pdf>. Accessed March 15, 2023.

¹⁴⁶ "67% Approve of South Korea's Nuclear Armament ..." *Hankook Ilbo* (January 2, 2023). <https://www.hankookilbo.com/News/Read/A2022122712090002350?did=NA>. Accessed March 15, 2023.

States and China.¹⁴⁷ This stance has increased U.S. discontent with South Korea's commitment to the U.S.–ROK alliance.

If the diverging threat perceptions and policy priorities persists, it could lead to the erosion of alliance cohesion. If the two countries have lower expectations regarding each other's commitment, there would be a chance that they would choose to address security issues independently rather than relying on the alliance. This would mean that the alliance's value to each country's national interests would diminish, causing the alliance's cohesion to weaken.

Therefore, the key to resolving the South Korean nuclear issue and sustaining a strong alliance between the United States and South Korea is to reduce the disparity in threat perceptions. This implies that South Korea's doubt about the credibility of U.S. extended deterrence may not be resolved solely by implementing deterrence-strengthening measures, as suggested by Brad Roberts in this volume. It also requires extensive discussions and comprehension of the alliance's goals in the Asia-Pacific region with regards to China's rise and North Korea's growing nuclear threat. It is necessary for the United States and South Korea to develop and discuss these issues through joint research. Thus, I will conclude this paper by proposing that the governments and expert groups of the United States and South Korea conduct a joint policy study on ways to mitigate the diverging threat perception and maintain the solidarity of the alliance.

¹⁴⁷ Ibid.